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FINAL BRIEFS FILED IN CASEIN CASE

Farmers' Associations Present Additional Reasons Why the Duty of 2½ Per Cent Should Not Be Lowered—No Additional Brief Is Presented by the American Paper and Pulp Association, Attorney Henry A. Wise, Feeling That the Case Has Been Fully Given to Commission in Earlier Briefs and Oral Arguments—Expected Now That Commission Will Take Case Under Advisement for Early Decision

WASHINGTON, D. C., July 16, 1924.—Two supplemental briefs have been filed with the Tariff Commission in connection with the casein tariff investigation. At the final hearing the Commission gave the parties until July 10 in which to file additional briefs.

Joint Brief by Dairymen

A joint brief was filed by John D. Miller and Charles W. Holman on behalf of the National Co-operative Milk Producers Federation and the Dairy Farmers affiliated with that association; also by W. H. Bronson representing the New England Milk Producers Association and A. M. Loomis, representing the American Dairy Federation. This brief of course was in opposition to lowering the present import duty of 2½ cents a pound. The other brief was filed by W. L. Crounse a local attorney on behalf of the Smith, Kline & French Company, of California, also in opposition to the reduction. No brief was filed by the American Paper and Pulp Association, Henry A. Wise, counsel feeling that the case had been fully given to the Commission in former briefs and oral arguments.

Mr. Crounse, in his brief, taking up the price of skim milk submits that the alternate methods, suggested by the Commission "of determining the price of skim milk are fallacious and proceed upon erroneous theories with respect to the conditions that surround the production, distribution, and utilization of whole milk, of skim milk, and, in fact, of all milk products."

He then goes into some detail in his brief, as to why each of these methods are fallacious. Mr. Crounse also takes up considerations bearing on skim milk price, the unwarranted attack on the casein industry, as he calls it, the facts about casein production in the United States, the undisputed facts as to the Argentine industry, and ends by taking up the protection for the domestic industry. He says that "there is obviously no reason why the duty on casein should be lowered and a vitally important industry throttled. On the contrary, it should be raised to enable the establishment on a firm basis of a profitable market for skim milk, substantially increasing the returns to the dairy farmer."

Have Presented No Evidence on Chief Point

The brief submitted by the farmer representatives is in considerable detail. It claims that the paper manufacturers "have seen fit not to present any evidence upon the question chiefly involved in the supplementary hearing; namely the cost of skimmed milk used in the manufacture of casein."

It is claimed in the brief that caseine is not a casual product, as claimed by the paper manufacturers and only manufactured during part of the year. Considerable space is also given to the matter of procedure in this case on which there was some controversy during the hearings. Now that the final briefs have been filed in the case it is expected that the Commission will take the case under advisement for final decision.

Press Fight Against Unfair Paper Imports

The campaign of the American Paper and Pulp Association for an organized fight against the unfair competition from abroad is going forward without hesitation and a special committee to handle the entire campaign has been holding frequent meetings to plan the details of the definite war to be carried on all along the line against the paper bootleggers. Meantime several specific cases have been reported to the customs authorities, in which there has been large scale mis-classification of imported papers. The most definite advance toward a successful conclusion of any particular grade of paper is that against the importation of imitation parchment under the wrapping paper classification. At a single port, there is an importation scheduled of 200 tons, which if properly assessed for duty would net the government about $10,000 more in duties than the sum which would be received if this paper were to be accepted as wrapping paper.

The importers are feeling the pressure of this movement to compel them to pay the proper duty, and one importing house notorious for its attempted evasion of the law has asked domestic manufacturers if they can not provide domestic paper to meet its needs, particularly in view of the increase in price of German papers. One big American mill refused to quote this house, saying it prefers to confine its distribution to houses which are loyal to domestic manufacturers.

Desist-Order Against Pioneer Paper Co.

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., July 16, 1924.—The Federal Trade Commission has issued a modified Cease and Desist Order against the Pioneer Paper Company. The order was issued as a result of stipulation agreed upon between the Commission and the paper company in docket 472.

The new stipulation orders the company to desist from using the word "rubber" in connection with roofing materials not composed of rubber.

CANADA'S PULPWOOD REPORT TOO LATE FOR PARLIAMENT

No Legislation Can Be Enacted at Present Time and Report, It is Said, Will Contain No Recommendation for Embargo Immediately—Certain Measures Tending to That Ultimate End, Will, However, Be Advocated—St. Regis Co. Offers $1,500,000 of Debenture Notes—Serious Fires Reported in Various Parts of Province of Quebec—Sale of Riordon Properties Asked for by Trustees.

[FROM OUR REGULAR CORRESPONDENT.]

MONTREAL, Que., July 14, 1924.—It is now reported that the Pulpwood Commission's report, which is overdue, will not be finished until after the preesnt session of Parliament is concluded, and that therefore no legislation in the matter can be brought forward for the present. It is understood that there will be no recommendation to impose an embargo on pulpwood immediately, but certain measures pending to that ultimate end are said to be favored.

In the House of Commons this week interest was aroused in a statement by the Hon. J. A. Robb, acting minister of finance, showing that when he heard members of the Commission had gone to New York and Washington he peremptorily ordered them to return to Canada.

"I should like to see the Commission report and get off the pay-roll," said Mr. Robb. He added, in reply to questions, that only some members of the Commission had gone to New York and Washington and when the matter was brought to his attention he wired them and they returned to Canada. The chairman of the Commission was getting $35 per day and the other members $25 per day, with living allowances. The cost of the Commission up to March 31 had been $48,000. The acting minister of finance had the assurance that the report of the Commission was almost completed.

St. Regis Co.'s Plans

The St. Regis Pulp and Paper Company of Canada is offering $1,500,000 of debenture notes. The purpose is to reimburse the company for capital expenditures already made to secure a site for mills for the future, and also to provide for the purchase of additional timber lands, negotiations for which are under way. The Company's policy, announced some months ago, to postpone the erection of a news print mill until such time as the present surplus of news print has been taken up by increased consumption, remains as the present policy. In the meantime, however, the new issue of debentures is paving the way for the erection of a mill which will have a final capacity of 400 tons of news print a day.

Sale of Riordon Properties

Applications is now before the courts for the sale of the Riordon Company's assets and properties by the trustees. The sale is expected to take place on September 1, and the properties in all probability will revert to the bondholders. This would clear the way for the final sale of the Riordon properties to the International Paper Company or other interests seeking to establish in the Canadian field.

Criticism of Proposed Straw Mill

Some of the papers here print a story from an unnamed chemical engineer criticising the proposed mill for the manufacture of paper from straw, which it is planned to establish in Winnipeg. While admitting that 40,000,000 tons of cellulose is wasted annually by the destruction of straw, this engineer says the market for book and writing papers in Canada is already over-produced, and it is questionable if the straw can be utilized for news print making. Meanwhile the project is meeting with practical encouragement. The railways have given beneficial rate schedules on straw, and Winnipeg financial men are planning to support the project financially. Stock is now being sold in the Company, which is known as the Canadian Chemical Pulp and Paper Company.

New Paper Company

The Gundy and Sweezy interests have completed arrangements for the reorganization of the Bay Sulphite Company which in a few days will be under the name of the Port Alfred Pulp and Paper Company. In addition to taking over the liabilities of the company as they stand at present, it is understood that an issue of bonds will be necessary to enable the company to go ahead.

While it is known that operation will be carried out at the Port Alfred Mill, it appears that the re-organizing interests have not yet decided as to whether they will take over Chandler, which may be given up.

Rumors are again afloat that Price Bros., are finally to take over the Chicoutimi Pulp group and that these interests are only waiting for an advantageous opportunity.

Walmsley Co.'s Orders

J. W. McCammon, sales manager of Charles Walmsley & Co. (Canada), Ltd., has written to the local papers in regard to references as to the number of paper machines at present on order or being manufactured by that company. He says:

"To obviate any misunderstanding that might react to the disadvantage of the paper manufacturers we hasten to advise you that in actual fact the total number of machines on order with both this Company and our parent company in England does not approach the number mentioned in your publication. At the present time apart from machines installed and operating we have on order for Canada: Two 234" news print machines, one 156" news print machines, and for Newfoundland; sir wide news print machines, one small wrapping paper machine. Any other machines on order are for English or European account and will not in any way affect Canadian production.

"We will very much appreciate any action that you may take to correct this misunderstanding."

Objected to Wharf for Paper Co.

A vote of $75,000 for harbor improvements at Matane, Quebec, met with determined opposition in the House of Commons at Ottawa, when estimates of the Public Works Department were under consideration in committee of supply. The vote, however, was finally carried.

Hon. J. H. King, Minister of Public Works, explained that the appropriation constituted the contribution of the Government to the construction of a wharf at Matane. The Hammermill Paper Company, which used the wharf to ship pulpwood to mills at Erie, Pa., was contributing the sum of $100,000 toward the construction of the wharf, and the Government had already paid $25,000.

Hon. H. H. Stevens, Conservative, Centre Vancouver, questioned the wisdom of this expenditure. A railway which connected with the Canadian National ran into Matane and could be used for carrying pulpwood.

Sir Henry Drayton said that any hope that Matane might have of becoming an industrial center was being destroyed by the construction of this wharf.

"How can they build a mill where there is no water power?" interjected C. G. Power.

Rt. Hon. Arthur Meighen asked why the Government should bonus an American firm to take raw pulpwood from Canada.

Dr. King replied that the wharf was needed for other purposes beside loading pulpwood. He admitted that the American company was getting some advantage, but it was also contributing materially to the cost.

The vote was then taken.

MORE ENCOURAGING SIGNS IN CHICAGO PAPER MARKET

More Aggressive Merchants Successful in Moving Sizeable Quantity of Stock—Marked Shortage of Stock Causes Peculiar Situation—Roofing Stock Dealers Boost Price on All Grades $2 a Ton—Plans for Summer Meeting of National Container Association—Extensive Tests Made of Containers for Strike-Anywhere Matches—W. G. Wolf Injured in Automobile Accident.

[FROM OUR REGULAR CORRESPONDENT.]

CHICAGO, Ill., July 14, 1924.—Some more encouraging signs of improved conditions are apparent in the Chicago paper market. Merchants, at least some of them, have found their sales to be better than they anticipated. The more aggressive are actually moving a sizeable quantity of stock. Naturally enough, business is not seeking a seller, especially at this stage of the year, but in some directions there are orders to be had. For instance, it is reported that printers are somewhat more active now than they have been for several weeks. This affects book and bond papers, causing out-of-stock sales to make a better showing than would otherwise be the case.

Reports received here from representatives of bond mills indicate that they are running nearer to full capacity now than they have been for a while. Most of them closed down on the evening of July 3 until July 7, taking advantage of a three-day holiday period to shove some business ahead for the following week, which, of course, would make operations run a trifle steadier afterwards.

Coarse papers still lack sales pep but factors in this trade accept the condition as typical of the season and in many instances are devoting sales effort to specialties or seasonable products. This keeps salesmen busy and substitutes profitable lines for the regulars which cannot be pushed with the necessary profit just now.

Accumulations of Paper Stock Run Low

It is said that a most peculiar circumstance has taken place in the paper stock branch of the market. While there is a great lack of demand, there is also a marked shortage of stocks and dealers report that they have exceedingly light stocks on hand. Some have even been required to leave packing machines idle for want of enough paper to keep them running. Members of the trade predict that this condition will cause prices to run higher when the demand again sets in. Inquires are being received by paper stock dealers but they say they carry with them requests for concessions and dealers are not listening to any such overtures, especially when the supply is limited, as it now is.

Put Increase in Roofing Stock Into Effect

Whether or not it is to keep up a good front or whether it is brought about by a scarcity, roofing stock dealers are putting into effect a $2 per ton increase in price on all four grades of stock. This is reported by a large concern which deals principally in this class of stock. So far as indications now point this price will be maintained for a while. Rags have been scarce, so the report goes, and roofing manufacturers have been fairly active in their taking of material.

Association Busy on Industry's Problems

Docket No. 19, of the Consolidated Classification Committee, contains proposals for several important changes in and additions to Rule 41, Consolidated Freight Classification No. 3, most of which have been published in response to petitions filed by the association. Among the suggested changes are the following: Thickness of fiber board facings to be used in manufacturing the 200-pound test corrugated box; new form of certificate of box maker; specifications for containers designed to carry a gross weight, and sealing, etc.

During the past few weeks, the association testing and designing laboratories in Chicago and Rockaway, N. J., have been unusually busy, and in addition to a number of projects which have been completed, others are now being studied.

Handbook on Corrugated and Solid Products

First copies of the association Handbook of Corrugated and Solid Fibreboard Products have been received from the printer. In order to take care of individual members' requirements, this booklet has been published in three separate forms, namely: Corrugated Fibreboard products, with illustrations and descriptions; Solid Fibreboard Products, with illustrations and descriptions; and, Both Corrugated and Solid Fibreboard Products. A copy of this booklet will be furnished to shippers upon application to the association.

Chicago Paperman Wins Golf Contest

Colter Rule, one of the best known paper salesmen in the Chicago territory, representing the Dwight Bros. Paper Company here, is also a golfer of some fame and skill. He succeeded in placing his flag on the first hole to win the first prize in the 18-hole flag competition on July 4 at the Aurora (Ill.) Country Club, nosing out his nearest competitor by three feet. Mr. Rule finished the 18-hole play with a gross 81 which, with his handicap of 12, gave him a 69. Three more strokes to make the course par of 72 placed him on the first green.

Riddell with Felsenheld and Daniels

Charles C. Riddell has associated himself with the Felsenheld & Daniels Paper Company, of 400 N. Michigan avenue, Chicago. He will be in charge of sales promotion work in the offset paper department.

Mr. Riddell has been identified with the offset paper business for the past 15 years. He has made this line his specialty. He is a prominent figure and has been for years in the offset branch of the industry, having sold the product of practically every mill which turns out that class of paper. He was formerly connected with the Moser Paper Company, merchants of Chicago, and previous to that had his own business in the Windy City.

"Billy" Wolf Hurt in Automobile Accident

W. G. Wolf, purchasing agent for the Paper Mills Company, met with an automobile accident on July 4, near Woodstock, Ill. He was driving over a detour when his car swerved to one side and turned over. He suffered a broken left arm, a scalp wound and several other minor injuries and was taken to his home in Chicago to recuperate. He is expected to return to his desk about July 21.

Wife of A. H. Dwight Dies

It was reported at the office of the Dwight Bros. Paper Company, that Mrs. A. H. Dwight, wife of A. H. Dwight, president of the Hawthorne Paper Company, of Kalamazoo, Mich., died early Thursday morning, July 3, in that city. The funeral took place on Saturday, July 5. W. E. Dwight, president of the Dwight Bros. Paper Company, and a brother of A. H. Dwight, left Thursday evening for Kalamazoo to attend the funeral.

D. Clinton Smith Drowned

D. Clinton Smith, general manager of the Carter, Rice & Carpenter Paper Company, of Denver, Colo., was drowned while in bathing at Buena Vista on July 4. Mr. Smith was one of the best known figures in the paper industry of the west. J. A. Carpenter, of Kansas City, Mo., and I. W. Carpenter, of Omaha, were in attendance at the funeral, which took place in Denver, on Tuesday, July 8.

KALAMAZOO VALLEY MILLS ARE IN GOOD CONDITION

In Spite of Unfavorable Industrial Reports Throughout the Country Close of the Second Quarter of 1924 Finds Local Mills with a Fair Amount of Orders on Hand, Insuring Operations on the Present Basis for the Next Quarter, at Least—Michigan Paper Mills Included Among Consumers Who Are Seeking Lower Freight Rates on Coal—General News of the Michigan Industry.

[FROM OUR REGULAR CORRESPONDENT.]

KALAMAZOO, Mich., July 14, 1924.—Despite the unfavorable industrial reports current throughout the country, Kalamazoo valley paper mills closed the second quarter of 1924 in unusually good condition and with fair amount of orders on hand, insuring operation at least during the next quarter, on the present basis.

One week ago announcement was made of the prosperous condition of the three local board mills, Standard Paper Company, Sutherland Paper Company and Western Board and Paper Company. Standard, at the beginning of the year increased its dividend from 6 to 8 per cent, while Southerland has gone on a 9 per cent basis. Both concerns paid their quarterly dividends on that basis, while Western Board is reported to have paid a 6 per cent dividend in July, a semi-annual payment.

Both Bryant Paper Company and Kalamazoo Paper Company continue dividends on their well established basis of 1 per cent monthly, while Rex Paper Company paid its usual 3 per cent quarterly dividend.

Allied Paper Mills is paying dividends on preferred stock regularly, but has not begun payments on the common. There is no report available on Hawthorne Paper Company, other than the statement that this concern earned its annual interest requirements the first four months of the ensuing year. It is known that Hawthorne has been unusually busy the past six months.

Kalamazoo Vegetable Parchment passed its quarterly dividend of 1½ per cent July. It is stated in financial circles that Parchment is pursuing a very conservative course and having falling a few thousand dollars short of dividend requirements the past three months, proceeded to defer payment. After considerable delay, the big machine is now operating satisfactorily and from this date forward should be a big profit maker. The concern's bond department is literally swamped with orders.

Michigan Paper Mills Want Lower Coal Rates

Coal consumers in western Michigan, notably Kalamazoo and Grand Rapids by means of 32 tests and 104 exhibits, attempted to sustain their allegations that the rates on soft coal from points in West Virginia, Kentucky and Tennessee to points in this territory are unjust and discriminatory. The contention was raised that the rate to Kalamazoo should be $2.78 a ton, or 32 cents a ton lower than the existing rate and to Grand Rapids $2.85 a ton, or 40 cents lower than the rate now in force.

This evidence was introduced Thursday and Friday in freight rate case instituted by the Michigan Paper Mill Traffic Association, Kalamazoo Chamber of Commerce and the Grand Rapids Association of Commerce vs. the Chesapeake and Ohio railroad et al. It was a case before the Interstate Commerce Commission and was held in the district court, Grand Rapids. The plaintiffs were represented by C. R. Hillyer, Chicago and J. F. Dougherty, Chicago; Charles H. Winslow, Kalamazoo, and Ralph Tuttle, Grand Rapids. J. S. Petterson, Richmond, Va., appeared for the defendants. P. F. Gault, Interstate Commerce Commission examiner, presided.

Evidence was introduced to show that Kalamazoo uses 755,000 tons of coal annually, with a trifle in excess of 400,000 tons consumed in Grand Rapids. Fully 90 per cent of this supply comes from the Kentucky, West Virginia and Tennessee fields. Kalamazoo's excessive tonnage is due to the large supplies of coal used by the paper mills.

It was further contended that a great saving could be effected if the railroads would route all coal through Columbus, rather than by Toledo and Detroit. The present arbitrary, based on Detroit, was declared to be unfair.

Among other charges made are that the railroads are using the long route in establishing the rate basis on coal, whereas in the case of other commodities, the short route is used; again that the class rates from Toledo are less than those from Detroit, yet in the case of coal, the rate is 50 cents a ton higher than the Detroit rate. While actual mileage is used in establishing all class rates, the forwarding roads have established a territorial basis for the rate on coal. Michigan consumers objected to that as unfair.

To Use Cheboygan's Sawdust

Cheboygan's mountain of sawdust is to be manufactured into wall board. After recent tests, the United States Gypsum Company has purchased the entire gigantic pile and will ship it away at the rate of 10 carloads—250 tons—a day. On this basis it will require more than 500 working days to remove all that is available.

This sawdust pile is the reminder of those days when Cheboygan was a great lumbering center. Back in the early seventies a small mill was installed at that point. At first the dust and shavings were burned, but that soon became impossible and all refuse sawdust was removed to an adjacent lot. Years and years of accumulation caused this pile to grow until it covered over 13 acres of land and was in places 50 to 60 feet in height. It was estimated that if this sawdust could be made into boards 12 feet long, 12 inches wide and an inch thick it would make 150,000,000 boards.

The white pine days have disappeared and with it the lumbering industry. The site of the first saw mill is now occupied by a unit of the Union Bag and Paper Corp. Throughout the years the sawdust pile has remained, the cause of wonderment of all tourists to that town. The waste product has been used freely for building roads across marsh land, also for packing ice in nearby ice houses. At last it is to disappear and within a period of two or three years will be a thing of the past.

General News of the Michigan Trade

Alexander L. Clark, secretary-treasurer of the Standard Paper Company, is seriously ill with bronchitis at New Borgess hospital.

Charles S. Campbell, treasurer of the Kalamazoo Vegetable Parchment Company, accompanied by his family is spending four months in the British Isles.

W. D. Toland, advertising manager of the Kalamazoo Vegetable Parchment Company, and Mrs. Toland have returned from a trip to New York and down the St. Lawrence.

Charles Bates Hunter, son of John R. Hunter, western sales representative for various mill supply houses, is the author of the successful farce comedy "Service for Husbands."

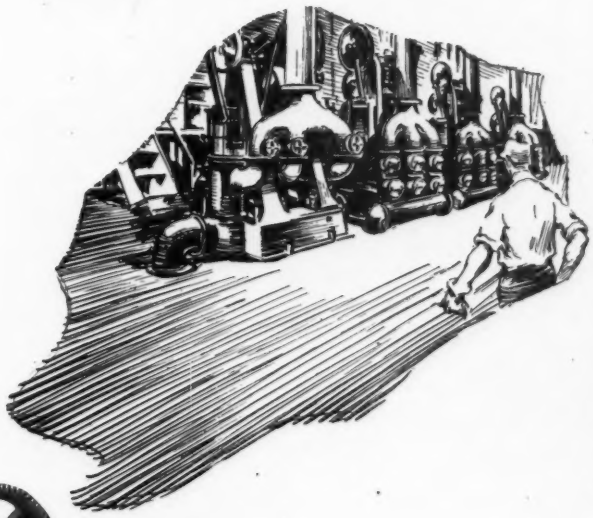
George H. Gerpheide, vice-president of the Allied Paper Mills, and faimily are summering at Pine lake.

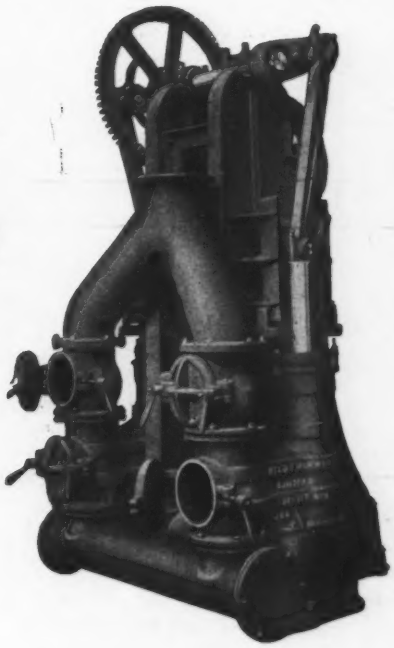
R. A. Hayward, general manager of the Kalamazoo Vegetable Parchment Company, has returned from a trout fishing trip to East Tawas, Mich.

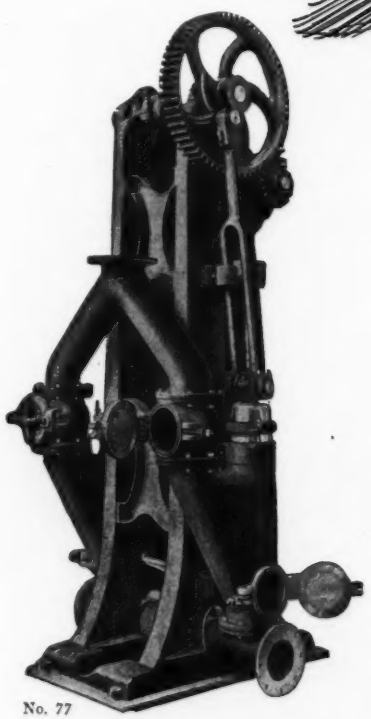
Bailey Ayres Wright, traveling sales representative of the Sutherland Paper Company, is spending his vacation at Kalamazoo and nearby summer resorts.

N. M. Brisbois, for several years general superintendent of the Sutherland Paper Company, has resigned his position and gone to Stockton, Cal., to accept a similar position with the National Paper Products Co. He is president of the Harmony Club and at one time president of the Michigan division of the American Pulp and Paper Mill Superintendent's Association.

The Efficiency Pump for Paper Mills







No. 77

BELOIT pumps are called "heavy duty" pumps because they are sturdy and strong. They are built for continuous 24-hour service and are gluttons for hard, steady work. They are regarded as the present-day *efficiency* pump for paper mills.

On our triplex pumps you will find forged steel crank shafts instead of cast steel. Our locomotive type connecting rod (regular equipment on our heavy-duty pumps) takes up the wear on crank and wrist pins while pump is in operation. The self-aligning feature prevents undue strain on cranks or frames.

If ever a part does become broken or worn out after years of hard usage, their construction is so handy that the repair can be effected easily and quickly, without the necessity of buying a considerable portion of a new pump.

Thousands of experienced board makers the world over know that Beloit pumps "deliver the goods."

It will pay you to turn first to BELOIT.

Beloit Iron Works **Beloit, Wis., U.S.A.**

Established **Since 1858**

HEAVY DAMAGES ARE ASKED IN ONTARIO PULPWOOD CASE

St. Maurice Lumber Co. Sues Porcupine Pulp & Lumber Co. for $83,817 and Latter Concern Begins Counter Suit for $80,452 in Cases Growing Out of Some Pulpwood Operations Four Years Ago—National Pulp Corporation to Erect a Plant to Cost $75,000 at Oshawa, Ont., for De-Inking Waste Paper—Big Shipments of Pulpwood for Thunder Bay District—General Trade News.

[FROM OUR REGULAR CORRESPONDENT.]

TORONTO, Ont., July 14, 1924.—An action in which over $160,000, is involved was set down for trial at the Supreme Court sittings recently in New Liskeard, Ont., but the case was postponed until the Fall assizes. The St. Maurice Lumber Company is suing the Porcupine Pulp and Lumber Company, Hoyle, Ont., for $83,817.37, and the St. Maurice Lumber Company has lodged a counter-claim for $80,452.89. The case revolves around some pulpwood operations four years ago. The blocking of the Porcupine River so that the logs of the St. Maurice Lumber Company was held up for twelve months, is alleged. The Porcupine Pulp and Lumber Company has entered a general denial and claims that the St. Maurice concern failed to live up to the terms of an agreement.

Examinations for Pulpwood Scalers

Hon. James Lyons, Minister of Lands and Forests, has, in accordance with the legislation passed by the Legislature at its last session, prepared a revised examination which must be taken by all Government scalers of timber cut from Crown lands. An innovation in connection with this examination is the division between scalers of pulpwood and those who measure saw timber. It is considered that a greater degree of skill is required in the latter operation, but all candidates for the position may take one or both of the examinations as they prefer.

Will Erect Plant at Oshawa

The National Pulp Corporation, Limited, will erect a plant in Oshawa, Ont., at a cost of $75,000 for de-inking waste paper. The city will provide eight acres of land and take a mortgage on the plant for the amount of $12,000. The building will be a two-story structure 60 x 100 feet, and the city will be repaid at the rate of $1,500 per annum without interest.

Big Shipments of Pulpwood

Recent word from Port Arthur says that the export of pulpwood produced in Thunder Bay district to the United States totals nearly 100,000 cords and is now under way. Recently in the harbors of Port Arthur and Fort William three boats were loading wood for Detroit and Erie. The total wood for exportation purposes is slightly in excess of last year.

New Ontario Colonization Co. Sues

Alleging irregularity in the amendment of a petition claiming $425,000 against the Crown by the New Ontario Colonization Company of Jacksonboro, Ont. F. P. Brennan, representing the Attorney-General of Ontario recently moved before Master in Chambers, Charles Garrow, K. C., of Toronto, for an order setting aside the amended petition. The petition arose out of an agreement made in 1912, by which the company obtained timber and pulpwood rights in the townships of Haggart and Kendry and undertook to settle and colonize in addition to paying $98,364. They were also to erect saw and planing mills. Owing to the war, the company states it was unable to carry out all the conditions, and the contract was terminated by the Government. The action by the company was for compensation. The Master ruled that as the amended words did not go beyond the original fiat granted by the Crown, he must allow them to be included in the amendment. The petitioner, however, was in error in including anything not provided for in the previous order, and must bear the costs. The Crown was also entitled to amend its defense.

Notes and Jottings of the Industry

George W. Pauline, managing director of Ritchie & Ramsay, coated paper manufacturers, Toronto, and family are spending a few weeks at Algonquin Park.

Harry P. Reid, superintendent for Kilgour Brothers, Toronto, manufacturers of paper boxes, and Mrs. Reid are enjoying a vacation at Port Severn, Ont.

E. Pullan, of Toronto, who is known as the "Waste Paper King of Canada" and Mrs. Pullan, have returned from a motor trip to New York, Atlantic Ctiy and Philadelphia. While in the latter city Mr. Pullan had a suitcase stolen from his car containing a number of valuable articles and some money.

The Ontario Colonization Department is colonizing a number of Danes in the Thunder Bay district. The men are taking out a quantity of pulpwood on the limits of the Provincial Paper Mills, Ltd., and are making use of the roads of the company and improvements in carrying out the work.

The Belleville Paper Mills, Limited, Belleville, Ont., have passed into the hands of a receiver, and George A. Stephenson has been appointed custodian. The company manufactures a cheap grade of board and it is understood that a number of waste paper firms are creditors.

George A. Davidson, sales manager of the Howard Smith Paper Mills, Toronto, and wife have gone on a tripe to the Gaspe Peninsula, Que., where they are the guests of their son, Eric, of the wood department of the Howard Smith Paper Mills, Ltd.

W. Braby, secretary of Wilson, Monroe Company, wholesale paper dealers, Toronto, is holidaying at Bowmanville and other points on Lake Ontario.

The Provincial Paper Mills, Toronto, are erecting a new warehouse at Mille Roches, which will be 80 x 120 feet in dimensions and built of gray granite stone. The company is also raising the roof of the beater room of its plant and putting on a new steel and gypsum roof. Several new beaters and Jordans are being added and the program of construction and renovation will entail an outlay of about $100,000.

T. E. Gain, vice-president of the Ratcliff Paper Company, Toronto, is back at work after an enjoyable vacation, the greater portion of which was spent on bowling greens. He is an enthusiastic member of the Rusholme Club.

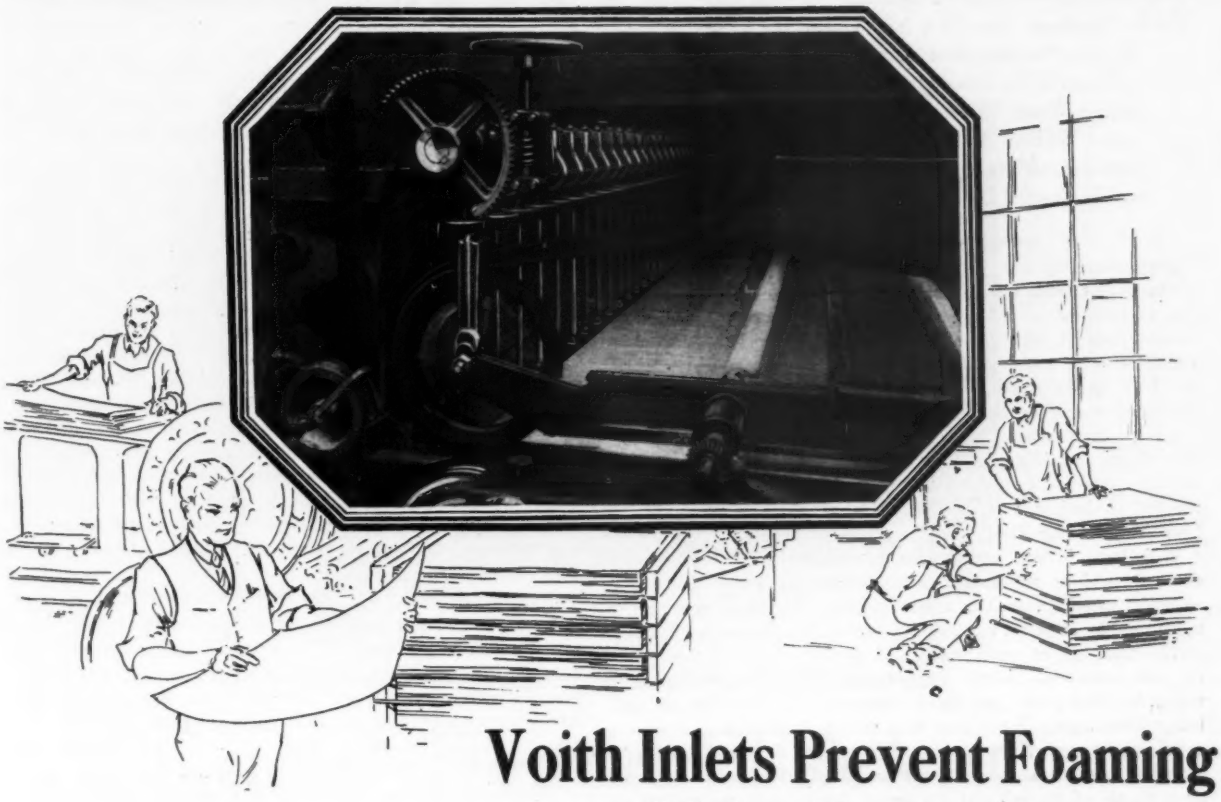
The annual picnic of the Canadian Nashua Paper Co., Peterboro, Ont., was held at Wallace's point on July 5 and proved a decided success. About one hundred and fifty employees and their friends took advantage of the outing. The were conveyed to the picnic grounds where an interesting programme of games and races was conducted.

Report on Box Board Expected Soon

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., July 16, 1924.—The first statistical report on production in the box board industry in the United States will be made public within the next two or three weeks, according to experts of the Bureau of Census who have charge of this work.

It is explained that the first two or three reports which are published will probably not be as accurate or as detailed as later reports inasmuch as it takes some time to get the manufacturers of customs to make accurate reports to the questionnaire. It is probable that the first report made public by the Bureau will deal with May production, but in the future it is expected that these reports will be tabulated and published within ten days or so of the end of the month.



Voith Inlets Prevent Foaming *and* Make Better Paper

The Voith Inlet

1. Eliminates foaming and assures a more perfect formation.
2. Makes it possible to speed up the machine materially, thus increasing production.
3. Gives additional space on the wire for formation purposes.
4. Eliminates all slices and aprons, thus reducing the wear on the wire.
5. Makes a sheet of uniform thickness across the entire width of the machine, through minute adjustments easily made.
6. Is easily installed and easily operated. It is simple and sturdy.

The importance of improving the quality of paper under present day conditions cannot be overestimated. The manufacturer who gives his printer customers papers with the best printing qualities will be the most successful.

By eliminating foaming on Fourdrinier machines, Voith High Pressure Stock Inlets give paper better formation. Moreover, the Voith Inlet gives space on the wire for formation purposes and makes possible a sheet of even thickness across the entire width of the machine. A better product invariably results when Voith Inlets are installed. Give your customers a paper with better printing qualities at an actual decrease in cost.

Write today for further information regarding Voith Inlets.

VALLEY IRON WORKS CO.

APPLETON, WISCONSIN

New York Office: 350 Madison Avenue

PHILADELPHIA TRADE SEES TENDENCY TO BETTER PRICES

Trade Conditions Have Not Yet Turned the Corner to Better Business But Improved Demand in Certain Stocks is Noted —Paper Mills Enter Upon Schedule of Part Time Operation—Waste Material Association Takes in 35 Members—William J. McGarity Establishes New Rag Department—Morgan H. Thomas Returns From Europe and Is Greeted By Philadelphia Paper Trade Association.

[FROM OUR REGULAR CORRESPONDENT.]

PHILADELPHIA, Pa., July 14, 1924.—While there was no great evidence that trade conditions have turned the corner for resumption of business on a large scale there was noted a decidedly improved demand both in orders for specific stocks and a more stabilized price trend generally. The improvement was reported for high grade printing papers including books and bonds and the chief source of buying was from the larger publishing and printing plants whose paper orders are placed in quantity lots. The larger establishments have been opening operations on a broader scale and it is from this trade barometer that distributors are led to believe that brighter days are in the offing. Prices have been holding firmly for all grades of fine papers.

With local jobbers endeavoring to stabilize prices, both as individuals and as an organization, through the Paper Trade Association meetings, in the coarse division, the mills continue to unload stocks at prices considerably below even the normal markets of ten years ago on some grades and specialties. For a few weeks in June there was absence of this mill offerings at rock bottom prices but last week they again appeared with inducements even better than those of the past few months and in fact at prices never quoted at such low figures since the war days and more on a par with those of a decade ago. Good No. 2 Krafts were offered by a couple of big mills at the lowest levels since the war in an effort to clean up hang-over stocks. A decided drop appeared in the price of grey and red rosin sized sheathing with $5 per ton deducted and some manufacturers offering these specialties as low as $35 per ton. Grey bogus figured around $1.90 per hundred pounds. Corrugated straw products are in fair demand and holding firmly. Tissues too have been stiffening in prices due to the absence of mill offerings.

Mills on Part Time Operation

The slackened pace of the industrial world is reflected in the paper mill colony of the Quaker city through the curtailment in operations now in force at the Manayunk plants. During the week preceding the Fourth of July holiday the majority of the mills were closed for the entire six days, beginning operations only on Monday of last week. The MacDowell Paper Mill was closed over the week end, stopping its machinery on Thursday night preceding July 4th. The other mills were closed the entire week. With the return to activity on Monday the mills were placed on a part time operation and it is expected that this will remain in effect during the summer schedule with a four to five day part time production in force.

Waste Material Association Broadens

Due to the broadening of scope of membership to the allied industries connected with paper stock business of Philadelphia there has been added to the ranks of the Waste Material Dealers' Association 35 new members, who are also engaged in the rag stock packing for paper mill consumption. A little over two months ago the Paper Stock Dealers' Association at its annual meeting decided to open its membership to other branches of the industry and for this reason changed its title so as to permit of the new policy. As the Waste Material Dealers' Association the new organization admitted to its ranks those firms which are engaged in the waste trade and catering to paper mills as well as to other users of these materials. The officers requested secretary McGarity to send out notices to the waste dealers informing them of the changed policy. Since this notice was issued and to date there has been received and admitted to membership the 35 new associates, bringing the enrollment up to 60 members.

Rag Department for McGarity Concern

Having completely established the new rag department in the paper stock warehouses of the William J. McGarity Company, 240 N. Front street, there is now being made the first mill shipments of stocks accumulated on a large scale in the 100,000 square feet of space which the company will devote to this end of the business. As a preliminary step in securing mill orders, William J. McGarity, Jr., son of the head of the firm who recently became associated with his father in the business, will leave this week for the round of the manufacturing plants in New England and in the Middle West, spending several weeks visiting the mill districts. Heretofore the McGarity firm has devoted business exclusively to the paper stock and wiping rag sales. Last month decision to enter the rag sorting and sales of rag stock to paper mills and the warehouse on North Front street was given over to this department under the management of John J. Costello. There was installed new sorters, balers, conveyors and bins and last week the equipment was completed and a large quantity of rag stock placed in the ware houses.

Lindsay Brothers Acquire New Home

Announcement was made during the early days of July by Lindsay Brothers of the removal to be made this month to its newly acquired home at 419 S. Fronth street. The firm, which for the past score years has occupied the present quarters in its own structure known as the Lindsay Building, expects to be settled in the new location by August 1. The S. Front street quarters consist of a five-story building with 25,000 square feet of space and will be given over to the distribution of fine and coarse papers in which the firm deals. It is Philadelphia distributor for the Westvaco lines of printing papers, featuring these chiefly although carrying other mill products. The acquisition of the new home was imperative owing to the desire of the purchaser of the present building, which Lindsay Brothers sold two months ago, to take possession of the premises.

Weaver Paper Company in Own Building

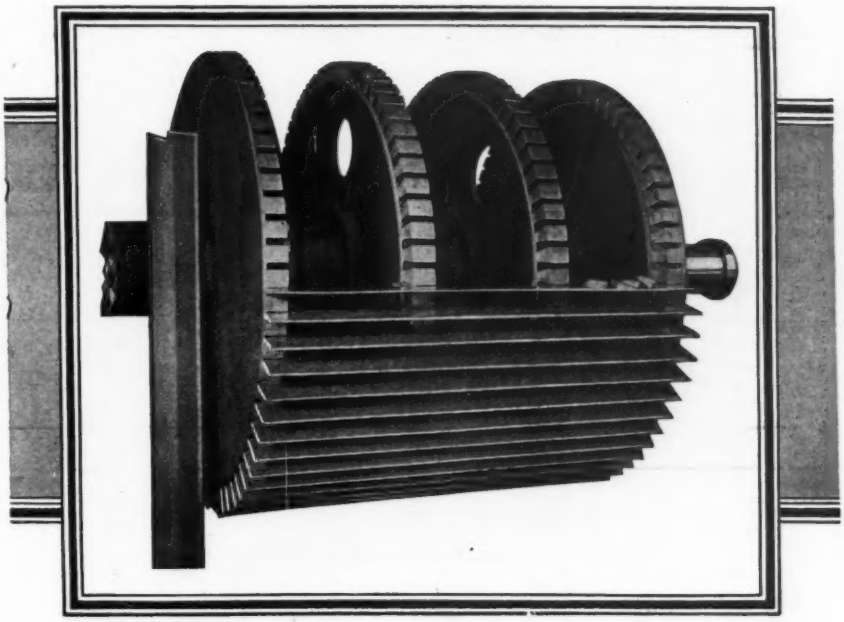
The Weaver Paper Company, for the past eight years occupying the building at 249 N. 2nd street, is now settled in its newly purchased and remodeled home at 447 N. 2nd street. The new quarters, devoted to the firm's business of dealers in Krafts and corrugated containers, consist of four story building with a frontage of 24 feet and depth of 190 feet and it is the purpose of the proprietor, S. A. Weaver, to expand the lines of coarse papers and particularly the corrugated box lines. The Weaver Company represents the Ideal Corrugated Box Company of Parkesburg, W. Va. The latter firm has just completed the construction of its enlarged factory in the Virginia city occupying almost an entire square.

Paper Association Greets President

Morgan H. Thomas, who just before sailing for Europe early last month was elected president of the Philadelphia Paper Trade Association, returned last Monday and presided for the first time in his new official capacity at the meeting of the Fine Paper Division held on Thursday noon. President Thomas who is also vice-president and general manager of the Garrett-Buchanan Company, was warmly greeted by his fellow associates in the fine paper trade who gathered there to welcome him home. All the fine paper houses were represented at the luncheon with the Garrett-Buchanan Com-

(*Continued on page* 58)

Dilts-



Ideal Beater Tackle

First designed for the severest service where the ordinary banded roll is not adequate—the Dilts Bandless Roll is now proving its worth on many grades of paper where the strength and durability of the roll are not the determining factors in its selection.

True, durability and immunity from danger of accident are good qualities in a beater roll for any service. No accident can knock a fly bar out of this roll, and a bent or damaged fly bar can be replaced without disturbing the other bars.

"Paper is made in the Beaters"

Cast steel heads, too, make this roll practically unbreakable.

It develops that for fine quality papers—for all papers it pays to install the Dilts Bandless Roll.

Better paper is made with it. Operating costs are lowered; the lost time of beaters is eliminated or reduced. This roll can be used in any beating engine.

6915

Dilts

MACHINE WORKS, Inc. FULTON, N.Y.

EXPORT OFFICE ~15 PARK ROW~ NEW YORK CITY

PAPER AND PAPER STOCKS IMPORTS AND EXPORTS OF THE UNITED STATES

For the Month Ending May 31, 1924, and for the Eleven Months Ended May 31, 1924, as Compared with Corresponding Months of Previous Year

IMPORTS—PAPER.

Paper and Manufactures of	May 1923 Quantity	May 1923 Value	May 1924 Quantity	May 1924 Value	Eleven Months Ending May 31 1923 Quantity	Eleven Months Ending May 31 1923 Value	Eleven Months Ending May 31 1924 Quantity	Eleven Months Ending May 31 1924 Value
Paper, except printed matter (total)	.....	$10,582,733	.....	$10,517,336	.....	$93,198,158	.....	$108,647,965
Printing paper—								
Standard news print...lbs..Free	230,285,232	8,610,203	226,523,317	8,516,141	2,158,311,214	78,221,173	2,451,193,583	92,426,897
Imported from—								
Finland...lbs.	12,923,838	433,456	8,929,409	286,332	67,093,251	2,089,066	65,805,651	2,129,933
Germany...lbs.	11,710,186	379,421	12,020,260	363,049	75,195,118	2,409,012	104,285,633	3,343,786
Netherlands...lbs.	656,398	22,696	361,085	11,738	9,264,753	317,213	766,589	24,691
Norway...lbs.	6,128,790	223,843	636,691	25,261	53,208,412	1,744,731	37,696,390	1,304,148
Sweden...lbs.	10,087,787	323,420	4,789,303	146,529	112,281,672	3,536,893	100,076,774	3,218,760
Canada...lbs.	187,467,062	7,182,806	199,471,162	7,673,743	1,832,930,578	67,842,316	2,136,317,605	82,209,948
Other countries...lbs.	1,311,171	44,561	315,407	9,489	8,337,430	281,942	6,244,941	195,631
All other, n. e. s...lbs..dut.	2,219,443	105,696	3,660,375	143,455	10,678,901	577,693	21,033,890	927,310
Grease-proof and water-proof papers.lbs..dut.	413,455	34,507	100,619	13,530	[2]1,746,998	[2]158,783	2,426,270	232,900
Wrapping paper...lbs..dut.	8,636,957	398,930	.....	.....	79,132,657	3,500,642	[4]44,709,325	[4]1,939,824
Kraft wrapping paper...lbs..dut.	.....	.....	3,150,552	117,680	.....	.....	[4]15,486,568	[4]578,047
All other wrapping paper...lbs..dut.	.....	.....	3,069,517	119,093	.....	.....	[4]10,270,563	[4]391,455
Writing, drawing, bond, etc...lbs..dut.	527,194	83,962	236,154	50,517	[2]2,226,349	[2]480,063	2,482,995	479,500
Surface coated...lbs..dut.	89,876	30,573	115,247	30,718	923,696	263,154	1,350,492	310,923
Tissue paper...lbs..dut.	203,306	114,732	133,406	55,987	[2]1,378,488	[2]615,724	1,905,576	824,554
Paper boards—								
Pulp boards in rolls...lbs..dut.	6,967,731	207,308	9,334,886	258,062	59,392,576	1,572,056	74,983,154	2,116,871
Other paper boards, n. e. s. ....lbs..dut.	2,144,730	62,360	4,842,164	106,507	[2]17,139,801	[2]482,570	25,709,565	694,687
Cigarette paper, cigarette books and covers...lbs..dut.	1,684,749	486,625	1,979,782	626,029	.....	3,416,350	10,244,893	2,689,239
Photographic paper...lbs..dut.	266,559	54,813	421,734	86,477	2,219,864	462,119	2,682,570	553,856
Hanging paper...lbs..dut.	455,681	34,235	644,502	33,728	.....	529,771	13,244,878	613,291
Paper boxes...lbs..dut.	.....	.....	139,793	94,210	.....	.....	[4]604,981	[4]385,368
Decalcomania, not printed...lbs..free	63,639	16,724	45,203	9,698	.....	96,059	392,461	98,242
All other...dut.	.....	342,065	.....	255,504	.....	2,822,001	.....	3,385,001
Books and other printed matter (total)	.....	609,432	.....	1,049,417	.....	7,286,377	.....	8,285,706
Books and other printed matter.....{free	.....	.....	.....	.....	.....	[1]881,331	.....	.....
Books and other printed matter.....{dut.	.....	.....	.....	.....	.....	[1]578,820	.....	.....
Books and pamphlets in foreign language...lbs..free	100,134	57,538	234,182	143,950	[2]1,051,268	[2]710,688	1,874,462	1,029,611
Books, maps, music, etc., 20 years old...lbs..free	35,861	67,690	41,590	416,259	[2]242,230	[2]1,244,241	325,957	1,457,058
Other books, etc...lbs..free	176,221	118,460	195,236	127,390	[2]1,389,290	[2]1,062,793	2,025,306	1,342,622
Books, pamphlets, and music, n. e. s.lbs..dut.	246,877	192,857	294,075	195,663	[2]1,658,828	[2]1,441,890	3,242,031	2,228,375
Maps, charts and other printed matter, n. e. s...dut.	.....	61,957	.....	60,235	.....	[2]405,442	.....	741,739
Lithographically printed matter, n. e. s...lbs..dut.	.....	.....	.....	.....	[1]572,749	[1]179,601	.....	.....
Cigar bands, labels and flaps...lbs..dut.	15,760	20,777	2,939	4,546	[3]102,455	[3]112,286	193,371	189,649
Decalcomanias...lbs..dut.	10,162	14,776	24,347	34,317	[3]102,836	[3]141,166	224,369	317,842
All other...lbs..dut.	.....	75,377	.....	67,057	.....	[3]528,119	.....	987,810
CRUDE PAPER STOCK.								
Rags for paper stock...lbs..free	46,135,555	840,683	37,542,203	845,218	349,158,243	5,939,752	388,169,455	7,586,007
Waste, bagging, waste paper, etc..lbs..free	17,025,634	228,963	7,750,219	79,893	[3]116,841,499	[3]1,549,458	92,633,599	1,101,096
Old rope and all other paper stock.lbs..free	12,524,940	562,443	10,153,294	530,332	132,483,527	4,656,076	89,049,046	4,510,864
WOOD PULP.								
Mechanically ground...tons..free	15,793	551,665	11,867	419,618	227,079	7,382,866	224,065	7,663,655
Chemical wood pulp—								
Sulphite, unbleached...tons..free	25,924	1,573,639	34,380	1,760,962	455,777	23,524,552	420,553	24,500,170
Sulphite, bleached...tons..free	21,782	2,049,237	19,386	1,491,169	229,852	19,830,473	220,941	18,611,007
Total sulphite...tons	47,706	3,622,876	53,766	3,252,131	685,629	43,355,025	641,494	43,111,177
Imported from—								
Finland...tons	5,685	355,617	9,890	493,040	55,039	2,905,765	50,591	2,977,926
Norway...tons	6,812	599,329	1,075	57,039	70,970	5,142,409	51,293	4,161,006
Sweden...tons	1,438	93,975	8,075	487,485	244,699	13,406,107	192,936	12,278,904
Canada...tons	25,784	2,003,020	23,964	1,621,318	279,956	19,598,459	277,038	19,319,043
Other countries...tons	7,987	570,935	10,762	593,249	34,965	2,302,285	69,636	4,374,298
Sulphate pulp, unbleached (kraft pulp)...tons..free	16,009	1,067,557	18,914	1,116,624	247,636	$14,777,046	227,852	$14,334,832
Imported from—								
Finland...tons	3,595	206,190	2,220	98,774	17,582	933,990	9,244	518,329
Norway...tons	316	19,702	300	15,361	8,539	444,498	10,036	552,346
Sweden...tons	500	30,223	2,350	129,887	93,772	4,929,433	81,636	4,890,390
Canada...tons	11,498	804,842	13,524	850,415	126,983	8,425,514	124,660	8,231,688
Other countries...tons	100	6,600	520	22,187	760	43,611	2,276	142,079
Sulphate pulp, bleached...tons..free	1,403	85,050	1,200	77,189	26,195	1,626,803	7,063	483,326
Other pulp...tons..free	19	308	89	7,149	[1]1,957	[1]103,615	6,540	398,419
CHEMICALS AND OTHER PAPER MAKERS' MATERIALS.								
Colors, dyes, stains, color acids, and color bases, n. e. s...lbs..dut.	294,555	388,039	186,126	219,891	[2]2,341,011	[2]3,151,054	2,831,016	3,715,876
Imported from—								
Germany...lbs.	90,281	107,886	66,630	77,534	.....	.....	1,393,343	1,667,316
Switzerland...lbs.	114,304	163,935	72,266	85,938	.....	.....	785,092	1,171,790
United Kingdom...lbs.	13,974	12,436	10,549	10,330	.....	.....	93,726	94,988
Other countries...lbs.	75,996	103,782	36,681	46,089	.....	.....	558,855	781,782
Casein or lactarene.....{lbs..free	.....	.....	.....	.....	[3]3,288,534	[3]346,431	.....	.....
Casein or lactarene.....{lbs..dut.	3,504,753	591,542	1,083,988	75,090	[2]20,710,841	[2]3,418,750	14,931,443	1,763,942
Kaolin, china, and paper clap....tons..dut.	37,861	430,884	27,881	277,259	294,980	3,208,580	259,175	2,707,569

[1]July 1 to Sept. 21, 1922. [2]Beginning Sept. 22, 1922. (*Continued on page* 34) [3]July 1 to Dec. 31, 1923. [4]Beginning Jan. 1, 1924.

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Good Will

The good opinion of our many friends is our most valuable asset—as it would be to any concern with anything to sell. It has taken many years to attain this desirable good will and it is our ambition to maintain it by a conscientious endeavor to further the best interests of our clientele.

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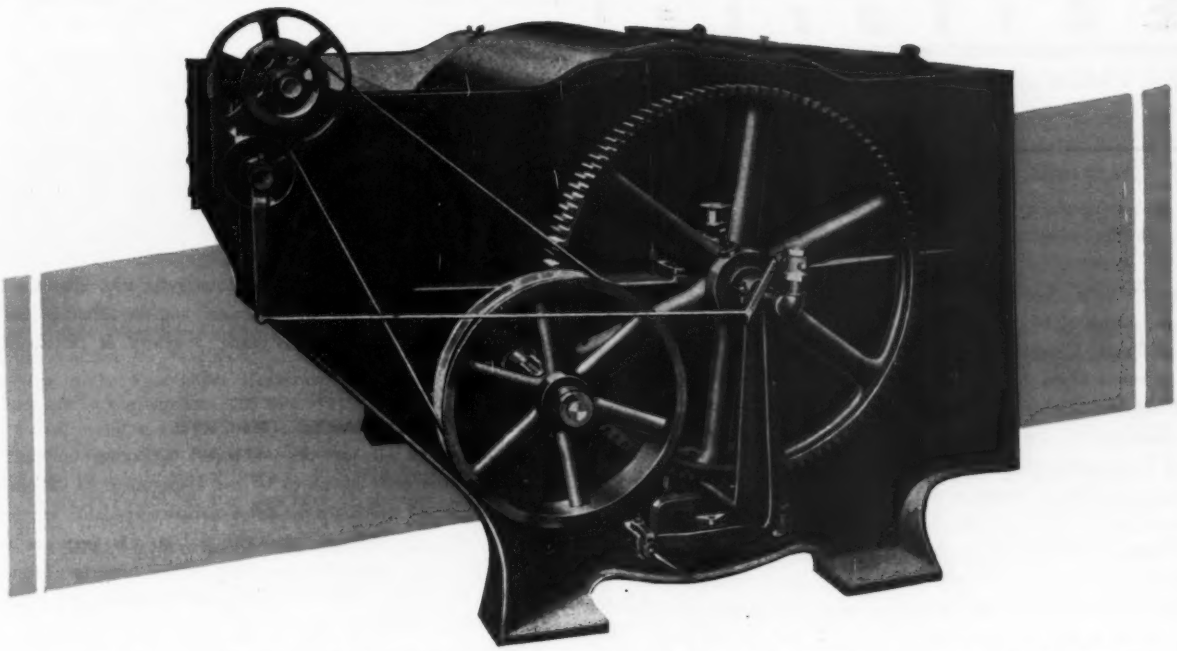
PAPER AND PAPER STOCKS IMPORTS AND EXPORTS OF THE UNITED STATES

(*Continued from page 32*)

EXPORTS—PAPER

Paper and Manufactures of	May 1923 Quantity	May 1923 Value	May 1924 Quantity	May 1924 Value	Eleven Months Ending May 31 1923 Quantity	Eleven Months Ending May 31 1923 Value	Eleven Months Ending May 31 1924 Quantity	Eleven Months Ending May 31 1924 Value
Paper, except printed matter (total)	.....	$2,317,010	.....	$2,076,353	.....	$23,062,713	.....	$22,809,445
Printing Paper—								
News Print Paper.....lbs.	2,990,010	157,723	2,842,210	140,293	35,988,400	1,733,719	29,828,845	1,496,096
Exported to—								
Canada	89,556	9,544	31,648	2,630	1,560,823	110,739	1,116,229	90,676
Central America	86,907	4,380	83,164	4,112	1,407,929	76,389	910,196	45,720
Mexico	140,687	12,852	277,124	16,050	1,131,905	76,524	1,772,320	92,632
Cuba	2,146,796	104,155	1,940,953	85,499	20,087,355	879,439	17,877,128	817,262
South America	58,116	3,122	146,386	8,884	5,520,690	258,684	1,637,716	89,829
Japan	94,444	5,540	133,393	10,352	688,832	46,947	1,263,310	82,574
Philippine Islands	324,038	15,745	59,221	4,274	4,285,599	207,014	3,594,209	174,613
Other countries	49,466	2,385	170,321	8,492	1,305,267	77,983	1,657,737	102,790
Book paper, not coated.....lbs.	2,267,191	264,826	1,356,764	162,315	27,131,386	2,787,057	19,020,063	2,186,916
Exported to—								
United Kingdom	38,276	8,168	75,307	17,656	547,801	116,137	704,732	137,511
Canada	201,898	28,844	189,004	21,870	2,442,465	295,896	1,825,778	235,595
Central America	71,398	8,943	51,637	6,531	514,991	58,897	747,095	88,483
Mexico	233,916	26,091	186,822	15,971	2,550,257	244,771	1,384,312	158,151
Cuba	687,477	80,121	315,318	37,981	7,003,673	707,099	4,031,613	448,893
Argentina	131,912	18,094	97,020	8,742	1,662,635	171,369	793,030	95,414
Brazil	13,991	2,227	28,600	3,865	1,291,584	140,313	513,464	61,390
Venezuela	10,551	1,696	4,425	444	511,361	57,258	500,508	53,166
Other South America	198,585	21,968	56,160	6,266	1,741,656	172,427	997,148	121,752
British India	21,454	2,265	1,831	437	226,825	25,479	105,363	13,310
China	192,120	19,119	98,535	12,279	1,239,672	122,167	2,339,636	229,773
Japan	146,029	15,602	9,716	1,540	2,247,488	180,838	1,365,419	138,673
Philippine Islands	194,612	16,304	131,266	13,182	3,419,365	303,026	1,966,359	182,737
Australia	37,360	4,599	33,876	4,937	796,641	89,111	742,442	95,983
Other countries	87,612	10,785	77,247	10,614	934,972	102,269	1,003,164	126,085
Cover paper.....lbs.	83,413	15,315	78,247	12,711	1,402,917	205,768	915,145	163,816
Greaseproof and waterproof paper.....lbs.	121,701	12,670	88,991	11,993	1,226,853	161,078	1,578,655	201,506
Wrapping paper—								
Kraft paper	37,597	3,354	72,042	12,509	606,180	49,154	777,850	83,284
Other wrapping.....lbs.	1,683,761	155,832	2,251,539	161,200	25,861,233	1,914,903	22,262,496	1,860,980
Writing paper, except papeteries.....lbs.	494,267	79,361	396,464	66,760	6,639,006	992,551	4,865,366	850,464
Surface-coated paper.....lbs.	589,533	75,494	264,596	39,454	3,641,711	525,998	3,158,307	491,243
Tissue and crêpe paper.....lbs.	194,348	44,828	179,188	54,064	2,869,535	734,213	2,961,674	761,706
Toilet paper.....lbs.	523,154	67,451	558,008	57,095	4,645,962	533,886	3,974,586	450,116
Paper towels and napkins.....lbs.	86,726	13,383	122,499	18,831	942,987	159,130	1,157,274	199,802
Bristols and bristol board.....lbs.	220,430	20,161	170,045	13,388	1,645,070	152,215	1,280,242	116,417
Paper board and straw board.....lbs.	5,688,317	281,253	5,513,150	225,352	45,115,309	2,135,520	60,365,652	2,633,581
Sheathing and building paper.....lbs.	296,773	12,181	457,193	20,735	4,980,750	177,341	4,108,762	188,653
Wall board of paper or pulp.....sq. ft.	1,384,670	51,746	1,157,286	48,528	12,037,106	423,903	18,067,426	624,897
Blotting paper.....lbs.	.....	.....	159,763	20,354	.....	.....	[1]1,054,939	[1]130,019
Filing folders, index cards and other office forms.....lbs.	.....	.....	31,129	11,864	.....	.....	[1]191,784	[1]69,559
Cigarette paper and books.....lbs.	50,511	15,272	76,610	32,024	586,414	207,569	853,426	295,274
Photographic paper.....lbs.	175,752	197,177	164,503	177,087	1,259,254	1,348,909	1,381,975	1,335,081
Paper hangings (wall paper).....yard	2,037,643	48,372	1,617,785	35,894	18,861,407	466,924	23,408,538	597,096
Paper bags.....lbs.	873,524	73,700	866,812	81,635	9,551,291	869,326	8,081,036	848,929
Boxes and cartons.....lbs.	1,147,792	101,866	920,935	91,598	9,273,826	868,575	10,951,106	1,021,750
Carbon paper.....lbs.	81,255	65,485	86,412	63,836	667,287	525,554	822,843	635,112
Envelopes.....lbs.	236,457	46,131	264,981	49,147	2,336,189	458,487	2,427,306	487,434
Playing cards.....pack	948,358	109,470	528,055	76,779	8,747,622	1,012,678	6,657,590	750,206
Cash register and adding machine paper.lbs.	78,401	8,930	134,890	12,965	959,975	100,387	1,210,416	135,507
Papeteries (writing paper in boxes)....lbs.	44,221	16,146	34,606	13,385	379,302	131,623	343,645	140,587
Other paper and paper products, n.e.s..lbs.	2,496,829	378,883	2,139,294	364,557	39,128,231	4,386,245	25,009,066	4,053,414
Books, maps, pictures, and other printed matter (total).....lbs.	3,664,854	1,461,012	4,525,864	1,613,460	42,741,585	15,935,836	48,845,337	17,365,440
Books and pamphlets.....lbs.	1,856,558	633,905	2,723,935	802,369	21,755,635	7,487,269	28,143,551	8,786,060
Maps and charts.....lbs.	23,614	23,716	14,075	19,481	170,333	158,988	146,283	154,630
Music in books or sheets.....lbs.	61,866	37,980	52,353	31,100	464,981	313,436	589,671	344,013
Souvenir post cards.....lbs.	20,308	9,378	16,274	6,293	367,409	168,855	499,124	197,278
Lithographically printed matter, except post cards and maps.....lbs.	157,886	129,724	230,024	116,846	1,769,672	1,386,655	1,959,254	1,455,633
Other printed matter.....lbs.	1,544,622	626,309	1,499,203	637,371	18,213,555	6,420,633	17,507,454	6,427,826
WOOD PULP AND PAPER STOCK								
Sulphite wood pulp.....tons	1,194	69,205	2,307	141,286	12,624	737,324	15,076	875,904
Soda wood pulp.....tons	217	19,600	186	12,468	2,801	245,937	1,771	167,308
Other wood pulp.....tons	54	5,037	654	92,822	1,920	74,187	3,291	239,819
Rags, and other paper stock.....lbs.	8,035,430	140,763	13,756,176	239,645	66,127,268	1,280,706	118,897,240	1,979,813
PAPER AND PULP MILL MACHINERY								
Paper and pulp mill machinery.....lbs.	570,496	94,297	474,094	134,082	11,860,314	1,844,658	8,476,199	1,761,590

[1]Jan. 1 to May 31. [2]July 1 to Dec. 31.



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6685

Editorial

Vol. LXXIX New York, July 17, 1924 No. 3

HENRY J. BERGER, Editor

ENGINEERING SCHOOL AIDS PAPER MILLS

Kalamazoo valley paper mills have drawn heavily on the facilities of the University of Michigan Engineering School during the past year, according to a statement just issued by Prof. A. E. White, director of engineering research. He announces that problems have been submitted by the Kalamazoo Paper Company, Western Board and Paper Company, Allied Paper Mills, Kalamazoo Vegetable Parchment Company and the Lee Paper Company. Other centers of activity, notably Detroit, have also made use of the department.

Members of the faculty generally are capable of supervising one investigation a year, according to Prof. White. The big problem is to find the graduate student capable of doing the work on the specific problem presented. Dr. White reports that 39 separate investigations were in progress at the engineering school during April.

"Most of the larger problems undertaken in engineering research are those of corporations having a specific task to be done," said Prof. White. "For the solution of this problem it is willing to pay the amount of a fellowship for one-half the time of the graduate student while he is engaged in the investigation. One of the consequences of making investigations is that the man employed follows the investigation by joining the organization for which the work was done."

A notable instance of that is in the case of Mr. R. A. Hayward, who came to the Kalamazoo Vegetable Parchment Company to do special work. He remains as general manager of that concern, thus relieving President Jacob Kindleberger of an immense amount of detail work.

INVESTMENTS IN RAW MATERIALS

Methods used by a number of large manufacturers to control their investments in raw materials are set forth in a pamphlet just issued by the Department of Manufacture of the Chamber of Commerce of the United States.

In commenting on the importance of this subject and the contents of the pamphlet, E. W. McCullough, manager of the department, said:

"Early in 1922 when industry generally had not passed the period of industrial stagnation and inventories of raw and processed materials in the storerooms of manufacturers were excessive, executives pretty generally came to an appreciation of the importance of establishing firmer control over their material investments. The subject is no less timely now. Although conditions have changed, the changed conditions have brought with them a greater need than ever for the closest control of every feature of the operation of manufacturing plants. There is now the necessity for the highest operating efficiency to meet the present keen competition. Any plans the manufacturer can adopt still further to reduce his investment in materials; to effect a firmer control over the use of materials; and to gain greater knowledge of his business most surely will meet with his approval. We have developed a pamphlet of helpful suggestions to assist the manufacturer in the development of an adequate plan of control.

"This pamphlet is based on the experiences of a considerable number of manufacturing companies that have developed satisfactory methods of control, hence it is not a textbook on the subject, but rather it reports the tested procedure of these manufacturers in connection with the various phases of the general subject.

"Doubt has been expressed by some manufacturers, for example, as to whether it is safe to do away entirely with the year-end physical inventory. This point is covered, and the actual procedure followed whereby the annual physical inventory is eliminated is presented."

PAPER IMPORTS

The imports of all varieties of paper, according to statistics which have jujst been furnished by the Department of Commerce at Washington and which are the latest statistics available, continued about the same for May as for April, but, as has been the case for sometime past, continued decidedly higher than for the corresponding month last year. The imports for May were valued at $10,517,336 as compared with $9,956,414 for April and $10,582,733 for May of last year. The imports of all varieties of paper for the eleven months ending with May were valued at $108,647,965 as compared with $93,198,158 for the same period ending with May of last year.

The imports of news print for May were valued at $8,516,141 as compared with $8,590,695 for April and $8,610,203 for May of the preceding year. The imports of news print for the eleven months ending with May were valued at $92,426,897 as compared with $78,221,173 for the same period ending with May of last year.

The imports of rags for paper stock for May were valued at $845,218 as compared with $1,025,389 for April and $840,683 for May of the preceding year. The imports of rags for paper stock for the eleven months ending with May were valued at $24,500,170 as compared with $5,939,752 for the same period last year.

The imports of mechanical wood pulp for May amounted to $419,618 as compared with $458,172 for April and $551,665 for May of last year. The imports of mechanical wood pulp for the eleven months ending with May were valued at $7,663,655 as compared with $7,382,866 for the same period ending with May last year.

The imports of unbleached sulphite pulp for May were valued at $1,760,962 as compared with $1,142,387 for April and $1,573,639 for May of last year. The imports of unbleached sulphite pulp for the eleven months ending with May were valued at $24,500,170 as compared with $23,524,552 for the corresponding period ending with May of last year.

The imports of bleached sulphite pulp for May were valued at $1,491,169 as compared with $1,476,521 for April and $2,049,237 for May of last year. The imports of bleached sulphite pulp for the eleven months ending with May amounted to $18,611,007 as compared with $19,830,473 for the same period ending with May of last year.

The imports of sulphate pulp for May were valued at $1,116,624

as compared with $894,992 for April and $1,067,557 for May of the preceding year. The imports of sulphate pulp for the eleven months ending with May were valued at $14,334,832 as compared with $14,777,046 for the corresponding period ending with May of last year.

Bids for Government Envelopes

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., July 16, 1924.—The Post Office Department will receive bids on August 7 for supplying more than 10,000,000,000 stamped envelopes and newspaper wrappers for the four year period beginning January 1, 1925, according to an announcement just made.

The Middle West Supply Company of Dayton, Ohio, at present, has the contract for furnishing stamped envelopes and newspaper wrappers to the Post Office Department. This concern has been turning out in the neighborhood of eleven million of such material every day, enabling Uncle Sam's postmasters to meet all demands made upon them from the general public.

For the fiscal year ended June 30, 1923, the Post Office Department spent $4,902,581 in the purchase of stamped envelopes and newspaper wrappers.

Of the 2,721,475,103 stamped envelopes and wrappers purchased by the Department during the fiscal year of 1923, there were 1,134,823,879 printed with "special request" return cards, and 1,286,651,224 envelopes and wrappers without return cards. The number of different forms of return cards was 942,550.

The successful contractor will be expected to be ready to begin delivery of stamped envelopes and newspaper wrappers on January 1, 1925, and thereafter they shall be furnished and delivered promptly and complete in such quantities as may be ordered by the Post Office Department.

Payments for stamped envelopes and newspaper wrappers delivered to the Post Office Department will be made weekly but only after proper examination and verification of accounts. The Postmaster General may withhold payment for such supplies delivered by the contractor if it appears that the contract has not been complied with in every particular.

If the Postmaster General should find, after the first six months of the contract, that there has been a legitimate decrease of 20 per cent, or more in the cost of producing and delivering the stamped envelopes and wrappers to the government than the original bid filed by the contractor, the Postmaster General reserves the right to revise the contract prices, the reduction in price to be determined by the Federal Trade Commission or some other accounting agency.

In like manner the contractor will have a right to increase his contract price for the stamped envelopes and newspaper wrappers if it can be shown that the cost of material and production has increased since the time of the filing of his bid with the Department.

Reports of Serious Fires

Alarming reports as to forest fires in several parts of Quebec Province are published here, but by the time this appears in print it is possible that these will have been extinguished. The most serious report comes from the Gaspe Peninsula, fifteen miles northeast of New Carlisle. Here rangers from the Government and Forest Protective Associations have been fighting a losing battle with the flames, and supplies of dynamite were being rushed to try to blast a gap in the path of the flames. Fires have occurred in Ashford township, on the south shore, in the Metapedia Valley, on the Papedia River, and on the Rimouski-New Brunswick border, but these are reported under control. Serious fires are also reported from British Columbia, particularly south of the Powell River.

Use of Cotton Seed Hull Fiber for Paper

CHATTANOOGA, Tenn., July 5, 1924.

Editor PAPER TRADE JOURNAL:

In the June 12 issue of your paper you have an erroneous article on cotton hull fiber. You will find this on page 38.

We do not know Chas. J. Brand, but your reference goes back to 1910. Since the war the writer formed the Stamsocott Company at Hopewell, where we turned out a hundred tons a day of pulp, using cotton linters and hull fibre to make the pulp, which pulp was sold to practically every high grade mill in the country.

After finishing the Virginia operation the writer had charge of the Procter & Gamble pulp mill at Memphis, where we handled approximately one hundred tons a day of cotton hulls, turning out an even better product than the Stamsocott did.

The letterhead on which this goes forth carries 40 per cent of cotton hull fiber, and as you will note is one of the cleanest and brightest sheets on the market.

As the PAPER TRADE JOURNAL is one of the authorities to the industry, I wish to correct this statement and trust you will take the proper steps to do so.

S. E. SEAMAN, vice-president,
Southern Cotton and Paper Co.

Rag Affidavits No Longer Required

Rag and paper stock importers as well as foreign concerns exporting such material to this country, and consuming mills will be glad to know that the Treasury Department at the request of the National Association of Waste Material Dealers has decided to withdraw the existing regulations with respect to the furnishing of affidavits and certificates to show that shipments of rags, etc., do not contain narcotics, or other contraband material. This requirement has been in effect for several years and had been imposed as a result of finding drugs in a shipment of rags. The importers and consuming mills at the suggestion of this Association have cooperated heartily with the Government Officials, even though to do so has been a real hardship in connection with the carrying on of their business.

Paper Mill Starts at Rockingham, N. C.

"Rockingham says the Courier of Ashboro, N. C., now has a model and modern paper mill plant which began operation the first of last week. The mill is capitalized at $75,000 with H. C. Wall, president; W. H. McCall, vice-president; and P. L. McCall, secretary-treasurer. The moving spirits in the new industry are the McCall brothers who came to Rockingham about two years ago from Georgia and started the manufacture of cones and tubes. The paper mill has a capacity of six tons of paper a day. The mill will supply the cone and tube plant and the surplus will be placed on the market."

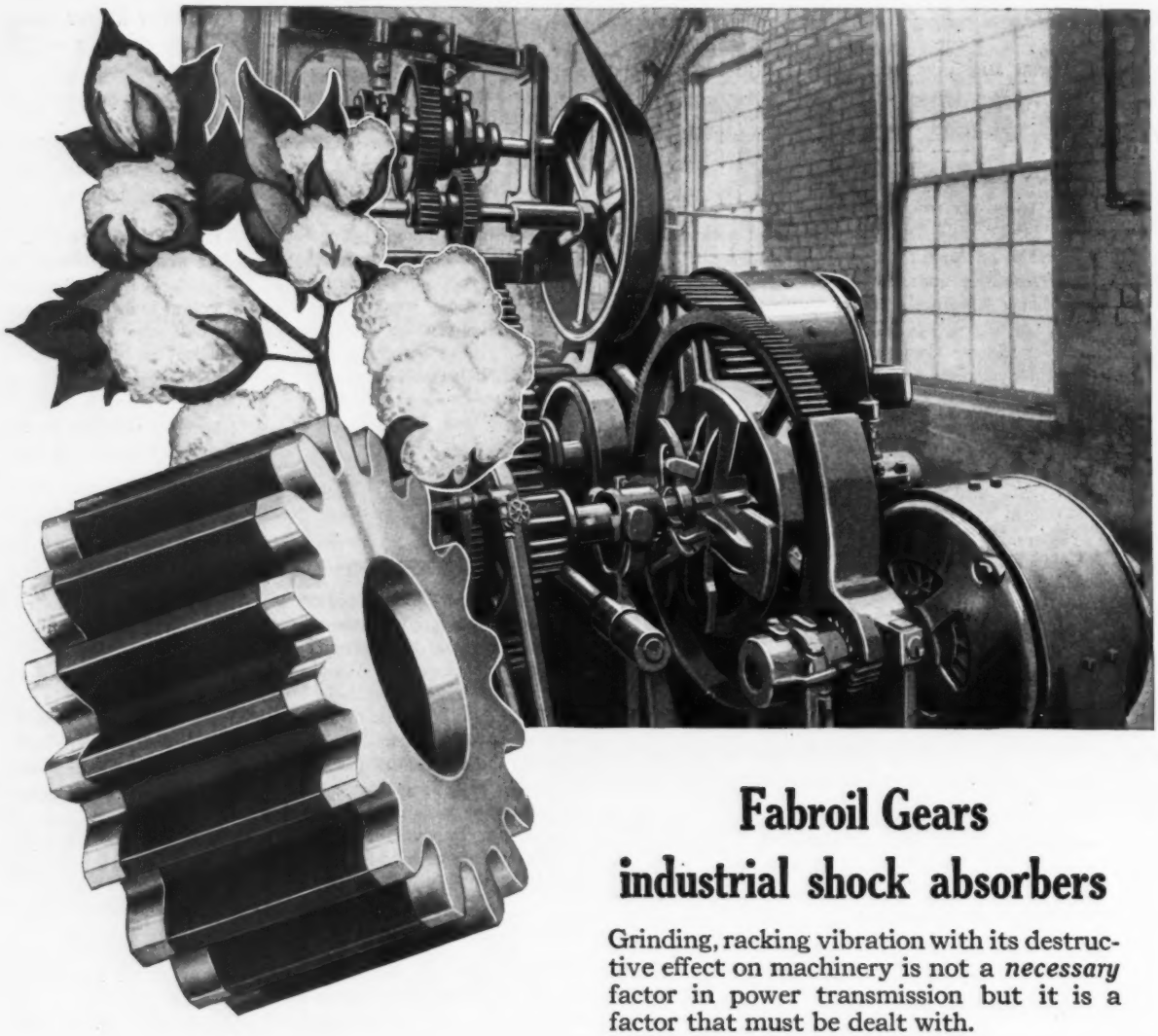
Paper Bag Factory for Pascagoula, Miss.

[FROM OUR REGULAR CORRESPONDENT.]

PASCAGOULA, Miss., July 11, 1924.—A paper bag factory will be located in this city on the old International Shipbuilding Company's site. C. T. Elliott, of Brookline, Mass., is the organizer and manager of the enterprise, which will be capitalized at more than half a million dollars. He is associated with similar companies which make paper bags and sacks by a patented process.

Paper Week in New York, Feb. 2

The annual convention of the American Paper and Pulp Association will be held during the week beginning Monday, February 2. The annual meeting of the Association will be held Thursday, February 5.



Fabroil Gears
industrial shock absorbers

Grinding, racking vibration with its destructive effect on machinery is not a *necessary* factor in power transmission but it is a factor that must be dealt with.

It is perfectly practicable to absorb vibration and cushion shocks with Fabroil Gears, manufactured by the General Electric Company for industrial service. These gears, made of layers of cotton under pressure, are resilient, silent and durable.

Out-wearing cast iron, Fabroil Gears will stand up under continuous service and may be stored for years without deterioration.

Textoil Board is a similar product chiefly of interest to machine manufacturers who desire to cut their own gears for less heavy service.

Descriptive literature may be obtained from any G-E office.

Fabroil Gears, produced by the General Electric Company after careful experimentation and tests, are made from layers of cotton compressed between steel shrouds. They are unaffected by oil, water, dryness, heat or cold and are extremely durable and resilient.

Textoil Board is made up of layers of cotton canvas impregnated with a viscous compound which renders the resultant product a homogeneous substance possessing the same properties as Fabroil but without the added strength of the metal shrouds.

Each product affords entire satisfaction in the service for which it is suited.

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GENERAL ELECTRIC

Section of the
Technical Association of the Pulp and Paper Industry

AN ORGANIZATION FOR THE ENCOURAGEMENT OF ORIGINAL INVESTIGATION AND RESEARCH WORK IN MILL ENGINEERING AND THE CHEMISTRY OF PAPER, CELLULOSE AND PAPER-MAKING FIBERS GENERALLY; IT AIMS TO PROVIDE MEANS FOR THE INTERCHANGE OF IDEAS AMONG ITS MEMBERS IN ORDER THAT PROCESSES OF MANUFACTURE MAY BE MADE MORE EFFICIENT AND IMPROVED ALONG TECHNICAL LINES.

Conducted by W.G. MacNAUGHTON, Secretary

BARK DRIERS AND REFUSE BURNING

Supplement to the Waste Committee Report on the Utilization of Pulp Wood Bark for Fuel *

By George D. Bearce, Vice-Chairman

For several years European countries, notably Sweden and Norway, have been making a study of the chip and refuse drying problem. Considerable wood fuel is used in these two countries and because the cost of coal is much greater than in the United States and Canada, more attention has been paid to reclaiming the heat value in all types of fuel.

The most successful refuse drying apparatus has been designed in Sweden and the method of removing the excess moisture is by using the waste chimney gases. The gases are by-passed from the stack and drawn through the refuse drying equipment in such a way that the material will be dried in a uniform manner. The degree of dryness can be regulated by the speed of the fan that controls the supply of waste stack gases and the amount of material fed to the equipment.

Conveyor Drier

One type of wood refuse drying apparatus, which is strictly a conveyor type of machine, is illustrated in Fig. 1. The conveyor is practically enclosed in a drying compartment or tower, usually

* Paper Trade Journal, April 17, 1924.

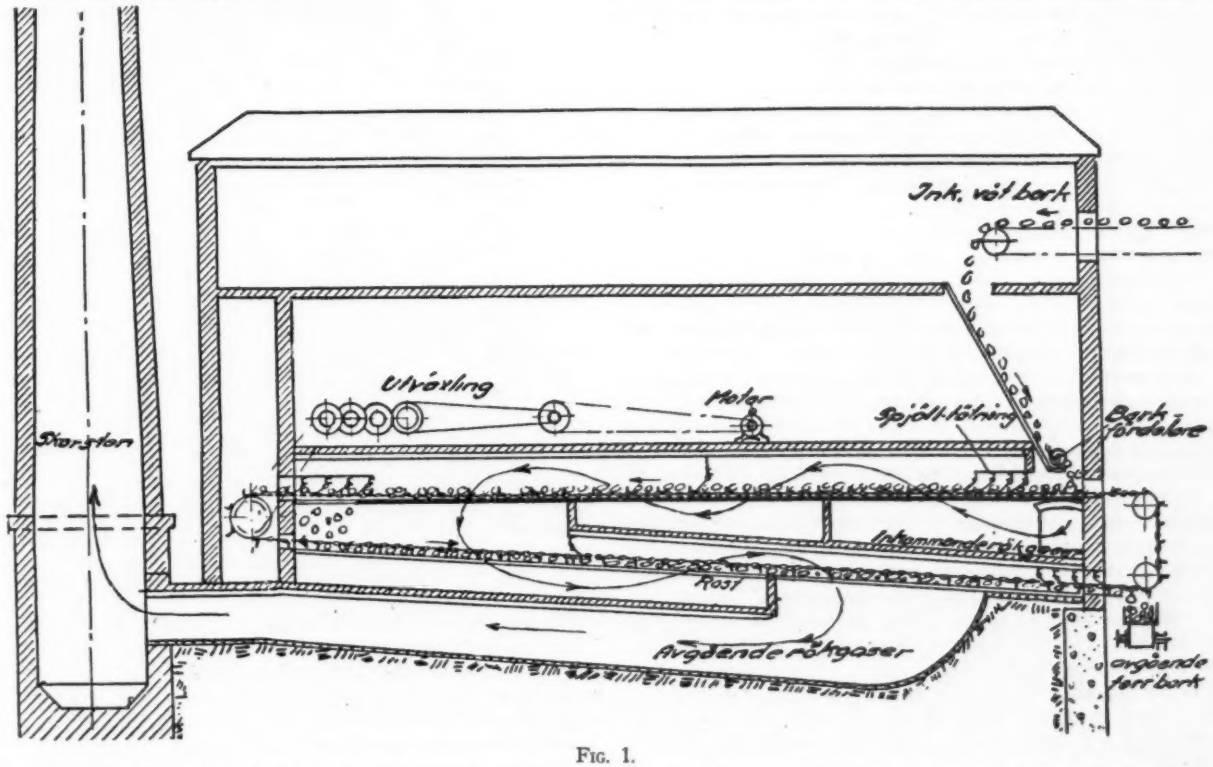

Fig. 1.

Arrangement Described by F. Grewin is the Latest Development—The Drag Conveyor Is Shown Together with the Flaps and Partitions Placed to Direct the Passage of the Gases Through the Material

Technical Section, Page 18.

made of ordinary brick placed between the boiler breaching and stack. The bark or wood refuse comes in near the top of the tower, falls on a horizontal conveyor and after going the length of the compartment is scraped to the lower section of the conveyor where it is carried back and ejected from the drying machine. During its passage through the machine the gases from the stack forced through the apparatus by a fan, are diverted by baffles and consequently come in contact with the refuse at several points. The travel of the gasses as well as the method of conveying the bark is indicated on the sketch which was described in Svonsk

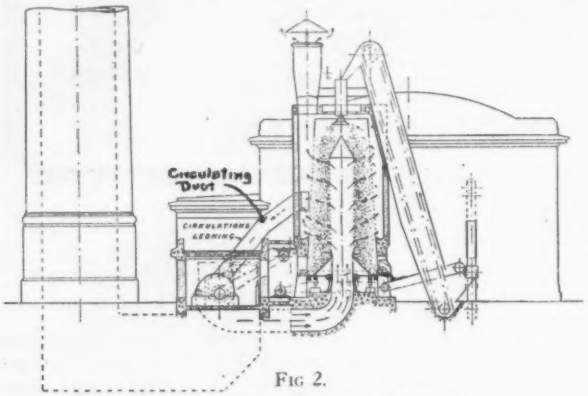

FIG 2.

Plant with Sectional Elevation of the Drying Tower

Pappers-Tidning, Nov. 4, 1921.—PAPER TRADE JOURNAL, Dec. 28, 1922.

A similar type of drying apparatus, the Nordstrom Drying Tower (Fig. 2), which is also used to some extent in the drying of chips, is described in Teknisk Tidskrift March 8, 1924. This apparatus also uses the chimney gases to dry out the wood refuse or chips, but the movement of chips and the circulation of hot chimney gases is somewhat different from the conveyor drying equipment. The tower is cylindrical in shape and consists of inner and outer round tower of perforated sheet iron. The bark or wood refuse is delivered by a conveyor to the top of the machine and the material works down between the two sections of the tower. The inner section through which the dry gases are forced is a smaller cylinder of sheet iron closed at the top. The gases are forced into the inner tower, through the encircling layer of refuse chips between the two sections, and then go through the perforations in the outer tower to the outlet of the drying equipment.

The feeding is done by a bucket elevator which delivers the material to the top of the tower and the dried material is removed by th partially conical rotary bottom which is equipped with scrapers that gradually remove the dry fuel.

A number of other types of drying apparatus, including the rotary drying drum, have been developed by some European mills with more or less success. The Hess drying equipment, which is essentially designed for the drying of chips and uses of live steam, has been tried out by a few United States mills.

The utilization of the stack gases in the drying of refuse bark may prove practical although in order to effectively use machines of this type it might be advisable to first remove all the moisture possible by means of mechanical equipment. If drying equipment of this kind can be installed at a minimum cost and operated with a small expenditure of power, it may be feasible in the treatment of the bark utilization problem. However, on general principles the most effective and economical place to dry out excess moisture is in the furnace itself and if bark and refuse can be delivered to the furnace at approximately 50 per cent bone dry, it may be unnecessary and impractical to consider fuel drying apparatus of this kind.

The rapid development of the pulverized fuel problem presents the possibility of burning bark with pulverized coal, under conditions that combine the drying and combustion of the fuel. A. J. T. Taylor, president of the Combustion Engineering Corporation of Canada, made the following statement in his recent article on "Powdered Coal in the Paper Industry" (PAPER TRADE JOURNAL, April 10, 1924):

"Careful investigation has shown that all wood refuse, whether wet or dry, can be efficiently burned in a hollow wall pulverized coal furnace simultaneously with powdered coal, provided the furnace volume is adequate. The maintenance cost will be negligible and whatever heat value the refuse has, less that required to evaporate its own moisture, will be made available for producing steam."

In order to obtain the highest efficiency of combustion the bark should be pressed so that it does not contain more than 50 to 55 per cent moisture when delivered to the furnace. Burning bark in conjunction with pulverized fuel would not require any great change in equipment or operation. It would doubtless be advisable to fire the bark at a fairly uniform rate by means of a screw conveyor or similar type of equipment, although this would not be absolutely necessary. The bark would pile up on the water screen and after the remaining moisture evaporates would be completely burned. (FIG. 3.)

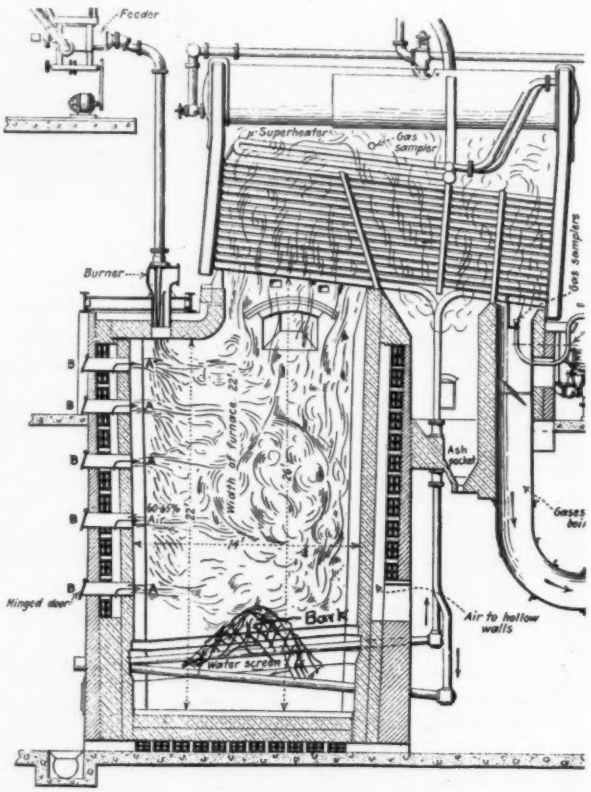

FIG. 3.

Hollow Wall Powdered Coal Furnace Indicating Probable Location of Bark and Refuse

The flexibility of the powdered coal unit would make it possible to operate the boiler at the desired capacity regardless of the volume of bark available, and if the supply from the wood should be cut off at any time, the powdered coal burner could be adjusted to generate the necessary steam. The problem of burning coal and refuse simultaneously offers great possibilities and is similar to the combination of refuse and oil which is being done successfully by at least one pulp and paper mill.

BLEACHING OF WOOD PULP

II. Effect of Hardness of Water

By C. E. Curran[1] and P. K. Baird[2]

In connection with current investigations of the factors involved in the bleaching of wood pulp, experiments have been made looking toward the determination of the influence of impurities, particularly hardness, in the water used for preparing the bleach liquor and for washing and thinning the pulp stock. Several waters of varying hardness have been compared for the purpose of measuring the variations (if any) in the rate of bleaching, color (whiteness), and yield of bleached pulp resulting from their use.

In most industrial waters the bulk of dissolved inorganic impurities are salts of calcium and magnesium—mainly the bicarbonates and sulphates. "Hardness" in water is due to these dissolved salts. In bleaching wood pulp the hardness of water is usually disregarded. This would seem entirely logical since the evident effect of the lime salts present in bleaching powder solutions would be to produce, with soft water, a condition similar to that present in hard waters. In the case of waters containing bicarbonates, however, the question may arise whether the effect of the water will be to reduce the alkalinity of the reaction mixture and increase the rate of decomposition of hypochlorite, with either loss of bleaching agent or over-bleaching as a result. In washing pulps, either before or after bleaching, the further question presents itself whether any of the salts producing hardness will cause a precipitation upon the fiber of resins or dyestuffs present in the pulp and thus interfere with the bleaching or removal of these coloring materials from the pulp.

Three series of experiments were carried out. In series I the effect of different waters upon dilute bleach liquor was measured by the consumption of active bleaching chlorine. Runs were made at two different temperatures. In series 2 an "easy-bleaching" sulphite pulp was bleached under standardized conditions, the only variable being the water used for making up the bleach liquor and washing and thinning the pulp. In series 3 a sulphate-kraft pulp was used. The bleaching conditions were slightly different from those of series 2 but uniform; in other respects the procedure was practically the same as in series 2. Because of the peculiar characteristics of the coloring matters present in sulphate pulps, particularly pulps from pine wood, special washing methods were employed with the bleached pulps to emphasize the effect of these coloring materials as such. The bleaching agent used in all experiments was a solution of calcium hypochlorite (bleaching powder).

The apparatus, methods of controlling the bleaching, analytical procedure, and methods of measuring the effect of the variables under investigation have been fully described in a previous paper[3].

For the experiments here reported four waters were available, as follows:

1. A hard artesian well water (Madison, Wis., city supply).
2. A medium hard lake water (from Lake Mendota, Dane County, Wis.).
3. A "zero soft" water (Mendota Lake water softened by Permutit system).
4. Distilled water.

Analyses typical of the Madison city water and Mendota Lake water are shown in Table I. In the "zero soft" water the relative composition of the lake water was unchanged except that the calcium and magnesium ions were replaced by sodium. The distilled water was free from impurities and was used as a standard of comparison.

The effect of suspended matter was discounted by using filtered waters in all cases of doubt. The possible influence of dissolved organic matter or of salts capable of catalytic influence was determined by noting the effect of the various waters upon samples of the bleaching solution (series 1). The effect of hardness was more particularly studied in series 2 and 3.

Series 1

Series 1 was essentially a blank determination.

Table I—Analyses of Waters Used
(Information Derived from Data on File in State Hygienic Laboratory, University of Wisconsin)
(Amounts indicated in parts per million)

Chemical	Artesian City Wells	Lake Mendota
Total solids	468.0	202.0
Mineral solids	316.0	160.0
Iron oxide[1]	1.1-0.5	2.2
Calcium	64.4	19.8
Magnesium	36.5	21.6
Sodium	8.6	3.6
Potassium	1.8	2.2
Carbonate and bicarbonate	194.7 (mainly bicarbonate)	77.2 (95% bicarbonate)
Sulphate	5.6	15.3
Chloride	3.0	3.0
Silica	....	15.2
Nitrogen, as ammonia	0.024	0.044
Albumen	0.04	0.264
Nitrite	0.002	0.002
Nitrite	0.04	0.08
Hardness (soap)	321.0	185.0
Alkalinity by methyl orange (as $CaCO_3$)	319.0	167.0
Oxygen consumed (by $KMnO_4$)	0.3	3.3
Color, odor and turbidity	0.0	0.0

[1]Content differs at the various wells and places sampled in city.

Samples of distilled, city, lake, and softened water were treated with equal amounts of bleach liquor, analyzed, let stand at room temperature (20°C.) for one hour, and again analyzed. The consumption of bleaching agent was thus found. In order to determine the effect of temperature the experiment was repeated at a temperature of 41°C. The standard methods of analysis were used, but the solutions employed were very dilute (N/50).

Procedure

Into four erlenmeyer flasks of about 1500 cc. capacity were measured separate one-liter portions of the waters. To each flask was added a measured amount of bleach liquor diluted to equal strength with the hypochlorite solution used in bleaching the pulps. The flasks were corked, shaken well for sampling, and samples then withdrawn and analyzed. After one hour on a constant temperature bath they were again analyzed. The initial concentration of standard powder in the four waters was 1.123 per cent, which is approximately equal to the concentration reached when bleaching at 8 per cent consistence and using 12½ per cent powder on the pulp.

Results of Series 1

No effect attributable to the waters employed could be discovered. The results of the tests are shown in Table II.

The results at room temperature (20°C.) were within the limits of error intitration and were remarkably uniform.

In the case of the 41°C. series the change in concentration was practically constant. For this reason it cannot be consistently attributed to the influence of the water but is more probably due to the formation of chlorates, a reaction which occurs when hy-

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[1]Chemist in Forest Products, U. S. Forest Products Laboratory, Madison, Wis.

[2]Chemist in Forest Products, U. S. Forest Products Laboratory, Madison, Wis.

[3]Bleaching of Wood Pulp—I. Factors affecting the process and their control. By C. E. Curran and P. K. Baird. Paper Trade Journal, Vol. 79, 1, July 3, 1924.

pochlorite solutions are heated above 38°C. The dilutions employed, however, made verification of this suggestion impracticable.

Series 2

In the second series, portions of an easy-bleaching sulphite pulp composed largely of spruce, but with a trace of balsam fir, were bleached under standard conditions of consistence, temperature, and procedure, the only variable being the water used. An effort was made to measure any variations due to the water by noting the rate of bleaching, the color of the bleached pulp (as determined by means of a Hess-Ives tint photometer), and the final bleached yield.

The bleaching conditions were: Temperature 41°C.; pulp consistence 8 per cent; and bleach liquor equivalent to 12½ per cent standard bleaching powder based on the ovendry weight of the pulp.

Procedure

The air-dry equivalent of 10 pounds of oven-dry pulp were placed in the bleaching apparatus. The required quantity of water was added and the pulp permitted to stand thus for several hours in order to insure thorough penetration. The bleaching apparatus was then set rotating and the temperature raised to such a point that introduction of cold bleach would strike the proper bleaching temperature (41°C.) in mixing. The latter temperature was maintained as nearly as possible, and at the end of 60 minutes a sample of pulp was withdrawn and the residual liquor pressed from it was analyzed for content of available chlorine. The pulp was washed and later used for the making of hand sheets for color determinations. The bleaching was continued until all available chlorine was exhausted. The exact time of exhaustion (when there was no perceptible color development with starch-iodide indicator after one minute) was noted. At this point a sample of the pulp was taken, washed thoroughly, and preserved for use in further color determinations.

TABLE II—INITIAL AND FINAL CONCENTRATIONS OF BLEACHING POWDER AND CHANGES

Kind of Water	Series I—20° C. Bleach Powder 3 Min. %	Series I—20° C. Bleach Powder After 1 Hr. %	Series I—20° C. Change in Concentration %	Series II—42° C. Bleach Powder 3 Min. %	Series II—42° C. Bleach Powder After 1 Hr. %	Series II—42° C. Change in Concentration %
Distilled	1.123	1.121	—0.002	1.132	1.065	—0.067
Lake	1.136	1.137	—0.001	1.136	1.094	—0.042
Soft	1.137	1.135	—0.002	1.136	1.056	—0.030
City	1.106	1.080	—0.026	1.110	1.049	—0.061

The same type of water was used throughout each run, from the preparation of the bleach solution to the final washing of the bleached stock.

Results of Series 2

The results, which were negative, are shown in Table III. Variations in the time of bleaching were very slight and any advantage in this regard was on the side of the distilled water runs, which was contrary to expectations. Color readings were very concordant, the slight differences indicated being well within the limits of error of the tint photometer. The most variable result was the yield. Because of the necessity of handling relatively large volumes of pulp and accounting for portions withdrawn for test purposes, the determination was somewhat complicated and liable to error. Considering this circumstance the results of this determination may be regarded as satisfactory.

Series 3

The method of procedure in the third series was the same as in the second. The conditions, however, were slightly altered.

A sulphate pulp cooked for kraft paper was used, composed of approximately equal parts jack pine and balsam fir.

Bleaching conditions were: Temperature 41°C.; pulp consistence 5 per cent; and bleach liquor equivalent 30 per cent (standard powder on basis of oven-dry pulp). The greater bleach requirement necessitated a change in consistence from that used in series 2 in order that the speed of reaction might be reduced and the exothermic heat distributed over a greater period so as to allow of accurate temperature control.

In this series the same water (Madison city water) was used for preparing the bleach liquor for each bleach. For all other operations the particular water under observation was employed.

The results of the series, shown in Table IV, are substantially the same as those of series 2. So far as noted, no effect upon the bleaching time, color, or yield was attributable to the water used.

Relation of Hard Waters to Residual Yellow Color of Bleached Pine Pulp

Methods of washing were tried in order to demonstrate the effect of hard and soft waters, and of such waters made distinctly acid or alkaline, upon the color of the pulp.

It is generally recognized that the bleaching of alkaline pulps presents peculiar problems. In the case of pine pulps, so far as they have been studied[4], it has been demonstrated that the compounds contained become yellow dyes by tautomeric change after bleaching. In certain pulp suspensions also a color change is effected by a differential in the hydrogen-ion concentration when acids or alkalies are added. After standing for some hours a white pulp will turn a fairly dark yellow, possibly owing to the dye present in the fiber concentrating upon the fiber surface. This dye is believed to be the "keto" form of a polyhydric phenol, or its derivative. The details of procedure and results obtained in the washing trials are shown in Tables V and VI with the color data for comparison.

[4]See An Experimental Study of the Significance of "Lignin" Color Reactions. By E. C. Crocker, Journal of Industrial and Engineering Chemistry. Vol. 13, No. 7, p 635 (1921).

TABLE III—DATA ON BLEACHING: SERIES 2

Run No.	Kind of Water	Total Time Minutes	Bleaching Powder at 60 Minutes[1] %	Shrinkage %	Average Temperature ° C.	Tint Photometer Readings: After One Hour Red	After One Hour Green	After One Hour Blue[2]	At End of Bleaching Red	At End of Bleaching Green	At End of Bleaching Blue[2]
15	Distilled	155	8.0	1.4	40.6	92.0	92.2	90.7	92.7	92.5	89.2
7	Distilled	147	4.3	1.7	41.3	91.2	91.5	89.2	90.5	91.2	90.0
8	Distilled	155	6.0	1.8	40.8	92.0	93.0	89.0	92.2	92.5	90.2
Average	Distilled	152	6.1	1.6	40.9	91.7	92.2	89.6	91.8	92.1	89.8
9	Lake	185	6.3	3.7	40.4	93.5	92.7	89.5	94.0	93.7	92.0
12	Lake	157	6.7	3.3	40.2	91.7	92.7	88.7	92.2	92.2	89.2
Average	Lake	171	6.5	3.5	40.3	92.6	92.7	89.1	93.1	93.0	90.6
10	City	170	5.4	3.9	41.3	91.5	91.7	89.0	91.0	91.2	88.5
13	City	160	6.2	1.8	40.6	92.7	92.2	89.2	92.0	92.0	89.2
Average	City	165	5.9	2.9	41.0	92.1	92.0	89.1	91.5	91.6	88.8
14	Soft	168	7.8	2.7	40.5	91.7	91.2	88.0	93.2	92.7	90.7
11	Soft	180	5.4	2.2	40.5	92.0	92.7	89.7	92.7	92.2	89.7
Average	Soft	174	6.6	2.5	40.5	91.8	91.9	88.8	93.0	92.4	90.2
Grand Aver.	.....	165	6.3	2.6	40.7	92.0	92.2	89.2	92.3	92.2	89.9

[1]Residual bleach shown as percentage of initial concentration in terms of bleaching powder.
[2]Blue readings in every case considered as white.

TABLE IV—DATA ON BLEACHING: SERIES 3

SULPHATE PULP (FROM EQUAL PARTS JACK PINE AND BALSAM) BLEACHED WITH 30 PER CENT POWDER AT 5 PER CENT CONSISTENCE

Run No.	Kind of Water	Bleaching Time Min.	Average Temperature ° C.	Shrinkage in Fiber Weight %	Tint Photometer Readings Red	Green	Blue	Remarks
31	City	80	41.7	3.6	88.5	79.0	71.0	
32	City	95	40.6	4.0	89.0	81.0	73.0	Special washing conditions tried with duplicate sample. See foot note 1.
33	City	95	40.3	3.6	90.0	82.0	73.0	See foot note 2.
38	City	90	40.3	4.6	89.5	78.0	69.0	
Average	City	90	40.7	3.9	89.2	80.0	71.5	
34	Soft	95	40.3	3.3	91.0	83.0	74.0	Special washing conditions tried with duplicate sample. See foot note 3.
35	Soft	85	40.6	4.3	90.0	81.0	72.5	
Average	Soft	90	40.5	3.8	90.5	82,0	73.2	
36	Distilled	90	40.6	3.4	91.5	81.0	71.5	Soft water used for washing bleached pulp.
37	Distilled	85	40.8	4.3	90.0	81.0	71.0	Soft water used for washing bleached pulp.
Average	Distilled	87	40.7	3.8	90.7	81.0	71.2	
Average All Runs	.....	89	40.6	3.8	90.1	81.0	71.2 72.0	

[1] Duplicate sample treated with dilute hydrochloric acid for five minutes, then washed thoroughly with soft water. Tint photometer readings: Red, 90.0; Green, 83.0; Blue, 73.0.
[2] See Table V for washing data on pulp after standing one month.
[3] Two duplicate samples (a) and (b) treated with dilute $NaHSO_3$ and "alum" ($Al_2(SO_4)_3$) solutions, respectively. Washed after standing two days. Tint photometer readings: (a) Red, 87.0; Green, 84.0; Blue, 77.0. (b) Red, 81.5; Green, 74.5; Blue, 66.0.

No pronounced effort of hard waters on the residual yellow color is indicated by the color determinations, Table IV, although variations of hard, soft, and distilled waters were used for bleaching as well as washing the hand sheets.

It was found that where just sufficient hydrochloric acid was used to acidify the stock, no difference in color could be found between washing with hard or soft waters. With an excess of acid, however, and similar washing, the color was whitened, indicating an extraction by pressing out the first acid treatment, retreating with more acid, and washing. In the double extraction by use of 2 per cent hydrochloric acid each time the whitening of the pulp was greater than in a single extraction with 4 per cent, a result which indicates the solubility of the dye in acid solution—probably as a hydrochloride.

It will be noted that the treatment of the pulp with acid was not carried out until several weeks after the bleaching. In the interim the color of the original stock had become darker, as always happens when such pulps are stored. Consequently the color readings of the pulp of run 38 immediately after bleaching and at the time of acid treatment are not the same.

TABLE V—HESS-IVES TINT PHOTOMETER READINGS ON BLEACH RUN NO. 38 TREATED WITH ACID OR ALKALINE WASH WATERS[1]

Sample No.	Red	Green	Blue	Remarks
1	84.0	70.0	60.0	Original stock after one month.
2	84.0	73.0	62.0	Treated with 2% HCl for 60 min. Washed with hard water.
3	85.5	73.0	62.0	Treated with 2% HCl for 80 min. Washed with soft water.
4	88.5	76.0	66.0	Treated with 4% HCl for 20 min. Washed with soft water.
5	89.0	76.0	65.0	Treated with 4% HCl for 30 min. Washed with soft water.
6	89.5	76.0	66.0	Treated with 4% HCl for 40 min. Pressed and washed with soft water.
7	90.0	79.0	68.0	Treated with 2% HCl. Pressed dry. Treated with 2% HCl. Washed with soft water.
8	84.0	73.0	64.0	Treated with 2% HCl. Washed with soft water. Treated with 2 % NaOH. Washed with soft water.
9	83.0	71.0	61.0	Same as 8 except hard water used for last wash.
10	83.0	72.5	62.5	Treated with 2% HCl. Washed with soft water. Treated with 2 % NaOH. Washed with soft water. Treated with 2% HCl. Washed with soft water.
11	82.5	74.0	65.0	Same as 10 except dipped from last acid solution.
12	74.0	64.0	54.0	Same as 10 except ended by making distinctly alkaline with NaHO and dipping from alkaline solution.
13	73.5	64.0	53.0	Sheet 12 split and inside color read.

[1] The pulp used in these treatments had stood one month and hence gave lower color readings than immediately after bleaching.

TABLE VI—HESS-IVES TINT PHOTOMETER READINGS ON SOUTHERN PINE SULPHATE PULP TREATED WITH ACID OR ALKALINE WASH WATERS

Sample No.	Red	Green	Blue	Remarks
1	64.0	51.5	40.5	Original; neutral.
2	71.5	58.5	45.0	Acid dip.
3	67.5	55.0	44.5	Acid and washed. Dipped neutral.
4	64.2	47.0	35.5	Alkaline; original stock. Dipped from alkaline solution.
5	64.5	51.0	40.5	Made alkaline—washed and dipped neutral.
6	63.5	50.5	57.0	Made acid with HCl. Washed. Made alkaline and dipped alkaline.
7	66.0	51.7	39.5	Made alkaline. Washed, made acid. Washed and dipped neutral.
8	66.0	53.2	42.5	Same as 4 except sheet was split and inside color read.

Summary

The effects of hard water upon the rate of bleaching, color, and yield of bleached pulp are negative so far as the waters used are concerned.

Changes in color of pulps cooked by the alkaline process may be brought about by differences in acidity or alkalinity of the wash waters used. So far as the waters used in this investigation are concerned, however, any differences in this respect were inappreciable.

Fiber Compositions Under Microscope

WASHINGTON, D. C., July 16, 1924.—A set of colored plates has been prepared by the Bureau of Standards of the Department of Commerce illustrating eight paper fiber compositions as seen under the microscope. They are intended to serve as reference standards for use in the identification of paper fibers and in the estimation of the fiber composition of the paper.

The fibers covered by the set are rag (cotton and linen), sulphite (coniferous), soda (deciduous), groundwood (coniferous), sulphate (deciduous), jute, manila, and esparto. Special stains were used to bring out the fiber markings. The fibers were drawn with the aid of a camera lucida and the drawings were painted with water colors, being matched by daylight with the actual fibers as seen under a microscope.

These drawings are expected to prove of great value to laboratory workers in the microanalysis of paper, as the colored micrographs come much closer than photomicrographs do to representing the fibers as they actually look when seen through the microscope. They show not only the form but the color reactions as well.

Pulpmill in Abitibi District

Interests which include the Bromption pulp people and the Lotbiniere Lumber Company are stated to be planning to erect a pulp mill on the Mesgicane River, in the Abitibi District. A few months ago a series of waterfalls in that section were leased by auction from the Quebec Department of Lands and Forests, and timber rights were also taken over. It is thought that the new pulp mill will be operated with the timber available on those limits.

CONTRIBUTION TO THE KNOWLEDGE OF THE CONSTITUTION OF SPRUCE WOOD LIGNIN (II)

By Prof. Dr. Peter Keason

Part 2

In communication number one[1] I have shown that the greater portion (about 2/3) of spruce wood lignin is a homogeneous body of the formula C_{22} H_{22} O_7. I called it acrolein or alpha-lignin. It contains an acetyl group capable of being split off which is present as acetic acid in the sulphite waste liquors. The residue of the formula C_{20} H_{20} O_6 occurs in the waste liquor as the calcium salt of alpha-ligno sulphonic acid of the formula C_{20} H_{21} O_6 SO_3 OH.

On this occasion I would like to add to the earlier data some additional experimental contributions. I showed that the above mentioned calcium salt of this acid gives with beta-naphthylamine hydrochloride, a yellow precipitate of the composition C_{20} H_{20} O_6 + C_{10} H_7 NH_2 — H_2O and that this salt is to be considered as an inner ammonium salt with naphthylamine coupled to the aldehyde complex.

$$R - CH_2 - CH \begin{cases} SO_2 - O \\ CH = NH - C_{10}H_7 \end{cases}$$

Of the original salt 0.866 grams used for the determination of the formula of the calcium salt gave 1.051 grams beta-naphthylamine salt equal to 98.5 per cent of the calculated quantity. The naphthylamine salt is very slightly soluble in water, (about 0.075 grams in 100 grams water).

Therefore, the calcium and the beta-naphthylamine salt correspond with each other completely and calcium chloride precipitates in accordance with this only the alpha lignosulphonic acid out of the waste liquors. In addition to this it may be noted that if the alpha acid is fractionally precipitated with a mineral acid, as M. Hönig and J. Spitzer[2] do this, most fractions contain an acid which apparently is to be considered identical with mine, which however, is separated out in the presence of also some other material.

The Beta-Naphthylamine Salt of the Alpha Lignosulphonic Acid

In order to test the degree of homogeneity of the naphthylamine salt, the fresh waste liquor is fractionally precipitated with salt (NaCl) and after that each fraction is treated with beta-naphthylamine hydrochloride. Finally there can be prepared a fifth salt direct from the sulphite waste liquor. For the analysis—the salt is first dried in the open air, then pulverized and thoroughly shook up with water, whereby very little goes in the solution. Then it is next again dried in the air at ordinary temperature and after this at 100°C, and finally at 120°C, to constant weight. The nitrogen determination was carried out according to Kjeldahl, in connection with which it must be noted that in my trials naphthylamine yielded 9.52 per cent nitrogen (calculated 9.72) and naphthylamine hydrochloride yielded 7.60 per cent—nitrogen (theoretical 7.79 per cent)

For $C_{20}H_{20}O_6$ + H_2SO_3 + $C_{10}H_7NH_2$ — H_2O = $C_{30}H_{29}O_6SN$ (563.43)

	Calc.	Found 1	2	3	4	5	Mean
C	63.92	63.99	64.01	63.90	63.85	64.10	63.07
H	5.19	5.43	5.47	5.37	5.21	5.49	5.39
S	5.69	5.65	....	5.85	5.70	....	5.73
N	2.48	2.20	....	2.25	2.22	....	2.22

In the ash there was present 0.45 per cent of silica ferric oxide and sulphate. The chlorine content was equivalent to 0.25 per cent naphthylamine hydrochloride. The impurities therefore consist principally of the components of the salt in a quantity about 1 per cent, which does not influence the results of the analysis worth mentioning.

If the solution is warmed with the precipitate the salt melts long before 100°C. is reached to viscous mass which solidifies in the cold to a brittle resin. This may be considered as an absorption or swelling phenomenon and is therefore an indication that the salt is at least partially of colloidal nature. When completely dried it cannot be melted. Freshly precipitated and washed, it is easily dissolved in the moist condition by methyl alcohol. If however, this solution remains standing for a longer time in a closed vessel there deposits on the wall of the vessel a crust of the salt. According to Prof. P. Quensel who has investigated this, it is perceptibly crystalline and also shows strong light refraction and distinct double refraction so that no doubt can exist concerning its crystalline state. Also, the precipitated salt is, according to him, fully crystalline after it has stood for some time in the solution.

This fact is, it appears to me, not without significance for, from it and from the analyses it may be concluded that this lignosulphonic acid and with it also the lignin itself are homogeneous bodies. This is of so much greater interest as the quantity of lignin in the plant kingdom apparently even exceeds that of the starches.

If the waste liquor has stood a time there is deposited on the surface a crust of calcium sulphate. This depends upon the fact that because of oxidation the sulphite reversibly combined with the aldehyde complex is finally completely split off. But the reaction does not stop at this. If the liquor has stood a couple of years and during this time become dark colored, one will find that the sulphur content in the naphthylamine salt prepared from it has fallen appreciably, indeed from a normal content of about 5.69 per cent to 5.3 per cent[3]. I have had at an earlier date the opportunity to call attention to the significance of, lime in the sulphite cooking process. I concluded then that the lime hinders the formation of free lignosulphonic acid, that this is decomposed with a darkening of color and that the formation of free sulphonic acid is the only cause of the so-called black cook. I considered the light golden yellow color (with a brown-like tinge apparently caused by iron) as the best proof that during the cooking no free lignosulphonic acid results.

I further emphasized that lignin can be dissolved by sulphurous acid alone—that one however by so doing, cannot prevent the liquor from becoming dark colored already at 100°C. Moreover, that which takes place at rising temperature must also take place gradually at ordinary temperature. One can accordingly assume that if the waste liquor has become darkly colored, then the acid also contains less sulphur than normal and for this reason is no longer adapted for lignin investigations. A completely different behavior is observed in weak alkaline solution. If one immediately separates the reversible sulphite from a fresh waste liquor with ammonia (Mitscherlich's test) and then prepares the naphthylamine salt, the latter shows the same composition as those previously mentioned. In fact one can heat an alpha-lignosulphonic salt several days with concentrated ammonia to 100° without having the naphthylamine salt thereafter prepared, suffer a marked diminution of its sulphur content. It is worthy of emphasis here also that the naphthylamine salt from a waste liquor which I myself have prepared by sulphite cooking at 100°c. showed the same constitution as a similar one from a technical waste liquor. There was obtained by analysis 63.90 per cent carbon, 5.10 per cent hydrogen, 5.69 per cent sulphur.

[1]First communication—Berichte, 53, page, 1864 [1920]. Also translated in TAPPI Papers, Series V [1922], p. 52.

[2]Akad. d. Wiss., Vienna, 1917.

Note—Translated by W. E. Byrcn Baker for the exclusive publication in the Papers of the Technical Association of the Pulp and Paper Industry, from a Sonderabdruck from the Berichte der deutschen chemischen Gesellschaft, which the author forwarded to the translator, with his special permission for its translation into English.

[3]Verein d. Zellstoff- und Papier-Chemiker, Hauptversammlung, 1909.

The Alpha-Naphthylamine Salt of the Alpha-Lignosulphonic Acid

The salt is a yellowish white, almost equally as insoluble precipitate as the beta naphthylamine salt.

$C_{20}H_{20}O_6 + H_2SO_3 + C_{10}H_7NH_2 = C_{30}H_{31}O_9SN$

Calc.	C 61.94	H 5.37	S 5.51	N 2.41
Found	C 62.09	H 5.56	S 5.43	N 2.31

This salt is therefore no inner salt but is a normal ammonium salt. It is also much lighter in color.

The Beta-Naphthalamine Salt from Methylated Alpha-Lignosulphonic Acid

As was stated in communication number one, the alpha-lignosulphonic acid can be methylated by methyl sulphate. However, in this manner only one methyl group can be introduced. The product behaves exactly like the non-methylated salt. It is therefore, like that salt, an inner ammonium salt.

$C_{21}H_{22}O_6 + H_2SO_3 + C_{10}H_7NH_2 - H_2O = C_{31}H_{31}O_9SN$

Calc.	C 64.44	H 5.41
Found	C 64.28	H 5.62

The Beta-Naphthylamine Salt from Ammonio-Alpha-Lignosulphonic Acid

The alpha-lignosulphonic acid salt was dissolved in concentrated ammonia and the solution heated several days at 100°C. The excess of ammonia was then evaporated off. Now, the beta-naphthylamine salt was prepared from the solidified residue. This salt is yellow brown. After drying first in the open air and subsequently at 100°c. it was analyzed.

$C_{20}H_{20}O_6 + H_2SO_3 + C_{10}H_7NH_2 + NH_3 = C_{30}H_{34}O_9SN_2$

Calc.	C 60.18	H 5.73	S 5.35	N 4.68
Found	C 60.09	H 5.85	S 5.14	N 4.63

How the ammonia is bound in the molecule I have not yet determined.

The Beta-Naphthylamine Salt from the Alpha-Ligno-Oxime Sulphonic Acid

If hydroxylamine hydrochloride is first added to a lignosulphonic acid salt and then beta-naphthylamine hydrochloride, one obtains almost immediately a pure white precipitate—a sign that the coupling with the aldehyde group takes place very rapidly. Upon gently heating the solution the salt melts together to a viscous light yellow mass which solidifies at room temperature to a brittle resin exactly like the previously mentioned salt. The salt is stable in air. It loses at 100°C. 5.26 per cent water; at 120° C. it loses 8.46 per cent. The nitrogen determination had to be carried out according to the method of Dumas in this case.

$2C_{20}H_{20}O_6 + 2H_2SO_3 + 2C_{10}H_7NH_2 + H_2NOH + 5H_2O = C_{60}H_{78}O_{24}S_2N_2$

Calc.	C 56.07	H 5.68	S 4.99	N 3.26	6 H_2O 8.41
Found	C 55.93	H 5.86	S 5.03	N 3.15	6 H_2O 8.46

Prof. Quensel could not notice that this interesting salt had any influence on the ray of polarized light. Under strong magnification it showed a quite crystalline appearance. There is therefore, the possibility that this salt either crystallizes regularly or forms an anisotropic medium of very low double refraction. The stoichiometric water content seems also to speak for the crystalline state.

From the constitution of the salt it can be most undoubtedly concluded that the acid at least in its salt possesses a molecular weight twice as high as I have formerly assigned to it. This stands also in agreement with a determination[4] which I have previously carried out with the calcium salt according to the boiling point method in which I observed as a mean value 982 (calculated 914). One determination with the potash salt which was prepared from the calcium salt and potasium oxalate gave about the same result. The acid behaves therefore in the salts as a dibasic acid. On the other hand I obtained by determining the freezing point depression the mean value of 1700 for the salt and for the barium salt indeed a still much higher number which very likely may nevertheless be attributed to the impurities of this salt. After all it appears to me from the numbers previously referred to, that the molecules of the salt of this acid have a tendency towards association with each other.

If the Aldoxim salt is heated up to 130°C. it loses still another molecule of water. If the dehydrated salt is then distilled with alkali one obtains ammonia in the distillate and indeed in an amount equal to 40 per cent of the calculated amount under the hypothesis that the oxime complex has undergone transformation into a nitrile radical.

[4] Sv. Kemisk Tidskrift, 1917, 49.

Condensation Product Between the Alpha-Lignosulphonic Acid and Semicarbazide

Semicarbazide hydrochloride couples with alpha-lignosulphonic acid just as easily as hydroxylamine. The indications are also that the coupling is entirely the same.

$2C_{20}H_{20}O_6 + 2H_2SO_3 + 2C_{10}H_7NH_2 + NH_2CONHNH_2 + 5H_2O = C_{61}H_{77}O_{28}S_2N_5$

Calc.	C 59.44	H 6.30	S 5.25	5 H_2O 7.31
Found	C 59.33	H 5.83	S 5.20	5 H_2O 6.51

The salt is stable in air and has a constitution analogous with the former ones. The water does not go off completely at 100°C.; at a higher temperature the salt is somewhat decomposed.

The Oxidation of the Alpha-Lignosulphonic Acid by Hydrogen Peroxide

About 20 grams alpha-lignosulphonic salt was dissolved in 250 cc. water and to this there was added 250 cc. strong hydrogen peroxide (30 per cent). The solution immediately darkened in color but the color became gradually lighter. The solution was now allowed to stand at ordinary temperature for 45 days. The formation of sulphuric acid under these circumstances could not be detected. It was then precipitated with alpha-naphthylamine hydrochloride. By so doing there resulted a white cheeselike precipitate which gradually agglomerated to yellowish clots. The washed out salt was first dried in the open air and then over phosphorus pentoxide at 60°C.

$C_{20}H_{20}O_6 + H_2SO_3 + 2C_{10}H_7NH_2 + O_2 - H_2 = C_{40}H_{38}O_{11}SN_2$

Calc.	C 63.64	H 5.08	S 4.25	N 3.71
Found	C 63.29	H 5.33	S 4.20	N 3.49

The analysis shows that the aldehyde complex has been oxidized to a carboxyl group and that in addition to this, however, a CH_2 group is transformed into a CO group. This might be considered the proof that lignin contains an aldehyde complex as a certain fact.

The Acetylation of the Beta-Naphthylamine Salt

I have attempted previously to acetylate the calcium salt; it was however decomposed in the attempt. A trial with the naphthylamine salt succeeded better; in this case two acetyl complexes entered into the molecule.

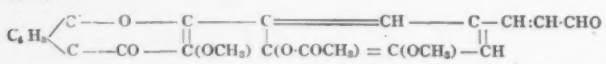
6.194 gram salt was covered with 20 cc. acetic anhydride; then it was warmed for about 12 hours to about 60°C. and finally for a couple of hours to 100°C. After this the whole mass was evaporated at 50°C. to dryness, whereupon there was obtained a dark colored mass consisting of rather hard pitchlike material. After repeated pulverizing and heating to 100° until the smell of acetic acid had completely disappeared, 0.870 grams of the powder were saponified with normal alkali. After the acidification with phosphoric acid the volatile acid formed was then titrated; in the titration 25.4 cc. tenth normal alkali were required. There had been formed therefore 0.152 grams acetic acid. For the acetylation of two hydroxyle the calculated amount of acetic acid is 0.161 grams. The salt could be transformed into the characteristic silver acetate.

The one hydroxyl in the molecule of the sulphonic acid which can also be methylated shows itself thereby to be the stronger negative hydroxyl and is therefore located in a benzol nucleus; the other which cannot be methylated is, in contradistinction, of a more positive alcoholic nature and must accordingly be attached to a more aliphatic group.

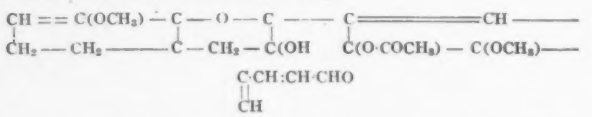
In the case of the cyclic olefine oxides the anhydride formation, as is well known in the case of ethylene oxide, is very easily broken open, but in the case of the five and six membered rings this is

much more difficult[5]. With more or less advantage one has tried to do this with glacial acetic acid saturated with hydrochloric acid. The calcium salt was for this reason therefore, dissolved in this reagent and then the whole solution was warmed to about 50°C. After that it was diluted with much water and precipitated with beta naphthylamine hydrochloride. The precipitate contained 2.2 per cent chlorine, a sign that apparently such an oxide oxygen atom is present in the acid and that the oxide ring was partially broken open by the reagent.

In the first communication I advanced the hypothesis that lignin was constructed after the type of Flavone and consequently contained a five membered pyrone ring which united two nuclei to each other, the one a coniferyl aldehyde and one of hydroaromatic structure.



This formula, the construction of which I base on the fact that the alpha-lignosulphonic acid is colored, must at the present time, in consideration of the results of the oxidation with hydrogen peroxide and acetylation, be rearranged into the following, which, just like the earlier formula, contains one aromatic and one hydroaromatic nucleus combined with a Flavone ring.



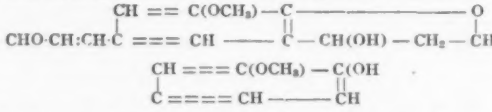
A variant of this formula would be that the CH_2 group lies not in the Flavone ring but between this and the coniferyl complex. The ring would then be a cumarone or furane ring.

The alpha-lignosulphonic acid is, insofar as this could be observed despite the color, optically inactive.

[5]Meyer-Jacobson, Lehrb. d. organ. Chemie.

Both formula schemes satisfy all previously known facts. The guaiacol resulting from the dry distillation can originate from the hydroaromatic complex by two hydrogen atoms changing their place. The doubled molecular weight of the acid established further above may be explained by the presence of a double bond in the hydroaromatic nucleus. In the literature there are indications that succinnic acid should result by the oxidation but these observations are yet very uncertain.

Self evidently one could also consider that two molecules of coniferyl aldehyde have condensed to one molecule lignin whereby only two hydrogen atoms must have displaced themselves.



Also here would be possible a variant in the sense that one transfers the CH_2 group outside the ring between this and the guaiacol ring.

This conception has the advantage that one such ring has been identified in nature by Kostanecki and Freudenberg[6] in their classical investigations in the tannins, especially the gambier catechin and specially through the masterly syntheses of 2.4.6.3'.4'—Pentamethoxy-alpha-gamma-diphenyl-propane and the preparation of the same compound from the gambier catechin. Contrary to this conception it may be argued that the catechin is optically active and colorless. Besides it would be difficult to understand how this formula can be doubled, if one would not simply assume that the molecules are merely firmly associated with each other.

It might be possible to decide the question only through a direct synthesis of lignin from coniferyl aldehyde; as soon as the opportunity presents itself I will carry out such an experiment.

The investigation is to be continued.

[6]Berichte 53, 1416 [1920].

CONCERNING LIGNIN AS IT OCCURS IN THE WOOD

By Prof. Dr. Peter Klason

According to an investigation by Faberlind and myself[1], about 17 per cent of the weight of the wood is extractable by a long series of boilings of spruce wood alternately with water and alcohol. In these operations we had weakly acidified the solvent with acetic acid, principally to prevent the action of the alkali from the glass Prof. S. Schmidt Nielsen has informed me however that according to his investigation of the process of solution this case is, in the main, a process of inversion. Fagerlind and I had at that time besides carbohydrates, obtained a resin in amount equivalent to about 2 per cent of the weight of the wood. After the coniferous resins were extracted from this by petroleum ether it could be separated into one part soluble in chloroform and one part soluble in glacial acetic acid. The latter amounted to about 1 per cent of the weight of the wood. The elementary analysis of the substance dried in vacuum at 50°C. had yielded carbon 59.97 per cent and hydrogen 5.66 per cent.

Fortunately I had preserved the substance. It showed still the same constitution (60.2 per cent carbon and 5.42 per cent hydrogen) was not however anhydrous, as was formerly assumed. It starts to carbonize already at 50°C. which the escape of the water prevented. It was first completely anhydrous at about 130°C. The calculated constitution is then carbon 63.94 per cent—hydrogen 5.74 per cent. The molecular weight was determined by us as 362 which number now must be increased to about 380 on account of the water content. Probably this lignin consists, like that of the wood, of two thirds alpha lignin and one third beta legnin. The calculated constitution of lignin in wood is, according to my first communication[2], 63.91 per cent carbon and 5.17 per cent hydrogen; with these figures the lignin of Faberlind and myself are completely in agreement. After a saponifaction trial a portion of the acetyl complex in the lignin in the preparation was split off, which however, changed the constitution only very little. This lignin gives now the most splendid lignin reactions. As it was heated with a solution of beta naphthylamine hydrochloride there reacted, as could be calculated, about 65 per cent of the lignin with the base; that is, the whole of the therein contained alpha lignin. The sulphite cooking did not succeed so well with it. By warming to 100°C. the mass carbonized, which prevented the solution. However, there could always be so much transformed into waste liquor that there could be precipitated from this the yellow beta naphthylamine salt. It is therefore evident that we are dealing with, in this case, the alpha lignin with unchanged acrolein complex exactly as it occurs in the wood. This acrolein complex is probably bound to the hemicelluloses in actual form and becomes free as soon as the latter goes into solution. The molecular weight of the lignin obtained in this mass is twice as great as that of coniferyl aldehyde. Either the lignin must therefore be polymerized in the original formation of the alpha lignosulphonic acid in sulphite cooking to double the molecular weight, or we are dealing in the case of the acid, with an association phenomenon.

Finally, I would also like to state that this lignin, just like the sulphonic acid, is optically inactive, at least so far as one can observe despite the color.

[1]Beiträge zur Kenntnis der chemischen Zusammensetzung des Fichtenholzes. Schritten des Vereins der Zellstoff- und Papier-Chemiker, Heft 2.

[2]Berichte 53, 1864 [1920]. Also translated in TAPPI Papers, Series V [1922].

CURRENT PAPER TRADE LITERATURE

Abstracts of Articles and Notes of Papermaking Inventions Compiled by the Committee on Abstracts of Literature of the Technical Association of the Pulp and Paper Industry

CLARENCE J. WEST, Chairman

Sulphite Waste Liquor

Use of Sulphite Waste Liquor in the Manufacture of Artificial Fibers, Films or Imitation Leather. R. J. Loeffler assignor to W. L. Voight. U. S. pat. 1,464,949, Aug. 14, 1923. A lignosulphonic acid such as precipitated by a protein from sulphite waste liquor is used together with dyes, viscose, fillers and other admixtures in forming fibers, films or artificial leather which may be treated with formaldehyde or other hardening agent.—A. P.-C.

Tanning Material from Sulphite Waste Liquor. W. H. Dickerson. Can. pat. 236,126, Dec. 4, 1923. A dry non-hygroscopic powder, suitable for tanning, consists of the solid organic constituents of sulphite waste liquor. The liquor is freed from calcium and magnesium, concentrated and subjected in a finely divided state to the action of heat.—A. P.-C.

Sulphite Liquor. G. A. Richter. Can. pat. 235,423, Nov. 6, 1923. Sulphur burner gases are passed through towers containing a basic material in the opposite direction to a flow of water to form a raw acid liquor with low sulphur dioxide content; from the relief liquor the gases relieved during the digestion are separated and caused to flow in countercurrent to the raw acid liquor to raise the free SO_2 content; the tail gas from the enriching towers is mixed with the burner gases; and SO_2 is recovered from the relief liquor and mixed with the gases passed through the absorption towers at a point where the percentage of SO_2 in the gas is not decreased thereby.—A. P.-C.

Sulphite Liquor. G. A. Richter. Can. pat. 235,424, Nov. 6, 1923. SO_2 is separated from sulphite waste liquor, and a basic material is mixed with the liquor to precipitate the combined sulphur as monosulphite, which is then separated from the rest of the liquor and converted into a bisulphite solution by reaction with sulphur dioxide and water.—A. P.-C.

Binder for Foundry Cores from Sulphite Waste Liquor. H. H. Hurt. U. S. pat. 1,467,321, Sept. 11, 1923. Ammoniated sulphite waste liquor is neutralized and concentrated. Any lime present is precipitated by treatment with just sufficient sulphuric acid or ammonium sulphate and the liquor filtered. Any excess of acid is removed by adding ammonia, and the magnesium present precipitated with ammonium phosphate. The liquor is then mixed with sixty times its weight of sand and baked at 450° C., a small proportion of petroleum oil being added before baking. The product is very suitable for use for cores in foundry casting, possessing considerable tensile strength and not being effected by the presence of water. Hitherto it has been impossible to obtain a binder rendered insoluble by a degree of heat which did not carbonize the organic materials present.—A. P.-C.

Use of Sulphite Waste Liquor for Dyeing Animal or Mixed Fibers. Paul Onnertz and A. Peters. U. S. pat. 1,441,240, Jan. 9, 1923. Animal fibers (wool, silk, etc.) are usually dyed in an acid bath to preserve the properties of the fiber which would be injured in neutral and especially in alkaline baths; but certain classes of dyestuffs, particularly substantive dyes, are not readily dyed owing to their insolubility. This is largely or entirely overcome by addition of a suitable amount of concentrated sulphite waste liquor to the bath (generally about 5 per cent of 28° Be. liquor). Sodium lignin sulphonate, "zellpitch," or other similar substances can be used instead of the sulphite waste liquor.—A. P.-C.

Adhesive from Sulphite Waste Liquor. H. S. Levenson. U. S. pat. 1,431,165, Oct. 10, 1922. A fatty oil pitch containing olein and palmitin is mixed with four times as much concentrated sulphite waste liquor to form an adhesive for making briquets or for a road binder.—A. P.-C.

Alkaline Processes

Process of Producing Pulp. H. and C. Branco. Eng. pat. 203,601, Dec. 15, 1922. The water-soluble constituents of the ashes resulting from the combustion of fuels, and particularly peat, brown coal and other kinds of coal, burnt alone or in a mixture with dried filter-sludge, can be used, with or without addition of certain acids or alkalies, for the digestion, under atmospheric or increased pressure, of cellulosic materials such as straw, esparto, bamboo, flax, hemp or wood. The quantity of ashes required is approximately the same as that of caustic lime generally used. The addition of certain acids results in the production of light yellow to deep brown pulp: by adding certain alkalies, pulps are obtained which are capable of giving a bulky and highly absorbent paper. "Ash liquor" is particularly suited for removing lignin from mechanically disintegrated materials, or ligin residues from pulps which have already been treated chemically. Wood pulp prepared by this process has a high content of long-fibered cellulose, and is suitable for the manufacture of strong printing paper. The spent liquor can be used for the production of cattle food or of alcohol.—A. P.-C.

Analysis of Lime Sludge from Causticizing Treatment in Pulp Manufacture. L. E. Walter and L. Gunkel. *Zellstoff U. Papier*, 4, 1-3 (Jan., 1924). The Lunge method (barium chloride and standard hydrochloric acid) for the analysis of lime sludge does not give an accurate end-point because there is usually present solid calcium hydroxide, which dissolves very slowly. Determination of the total alkali by evaporation with ammonium carbonate and subsequent titration of the aqueous extract with standard acid gives values not only representative of the sodium hydroxide present but also the sulphide and silicate. Portions of sodium sulphite or sulphate, if present, are converted to carbonate. Christiansen's control method has the disadvantage that the calcium hydroxide in the sludge is not determined. This method and the one of Sieber are time-consuming and not simple to carry out. The authors suggest that for plant control a determination of the total sodium compounds and of the calcium hydroxide content is sufficient. (1) 25 cc. of sludge are mixed with a small quantity of water and an excess of ammonium carbonate solution, and boiled until no more ammonia is evolved. The mixture is then diluted to 500 cc., filtered, the first portion being rejected, and 200 cc. of the filtrate titrated with 0.1 normal hydrochloric acid, using methyl orange. One half the sulphite and very little of the sulphate are converted by this treatment into carbonate. If the sulphate is present in more than a trace, which is not common in ordinary processes, it may be determined separately. (2) Another 25 cc. sample is diluted to 5 l. and allowed to stand 1 hr. with frequent shaking. It is then filtered (assuming all the $Ca(OH)_2$ is dissolved) and a 200 cc. portion titrated as above. Difference between (1) and (2) gives calcium hydroxide. Good agreement is shown with other methods and the end-point is sharp. The methods are rapid.—J. L. P.

Recovering Valuable Products from Gases of Soda Furnaces. O. Nordstrom. U. S. pat. 1,471,276, Oct. 16, 1923. The waste gases from the soda furnaces of sulphate mills are passed with chips of wood through a filtering shaft so that the hot gases dry the chips; the latter serve to remove from the gases dust and subliming

TECHNICAL SECTION, PAGE 26

products. The chips and absorbed products are then cooked in a sulphate digester.—A. P.-C.

Treatment of Black Liquor. L. J. B. A. Colas and A. P. J. Colas and L'Alfa Societe Anonyme pour la Fabrication des Pates de Cellulose. Eng. pat. 200,484, Mar. 29, 1923. The black liquor from the boiling of esparto is treated with a flocculating agent, preferably oxalic acid, to liberate the "fatty substances" which are then separated by a solvent and the extracted material is separated into its constituents in known ways. The original liquor is then treated with a base such as lime or magnesia or with powdered animal black which absorbs most of the impurities remaining in the colloidal or true solution. The separated lime is treated with a solvent to remove a part of the absorbed matter and is then distilled to remove the remainder. The original liquor is then distilled fractionally to recover volatile substances and when sufficiently concentrated is fed, with or without carbon, to a calcining furnace in which the soda is recovered in a more or less caustified form.—A. P.-C.

Strainer for Sulphate Digesters. F. E. Johnson. U. S. pat. 1,459,913, June 26, 1923. In order to eliminate the unequal strains and consequent distortions which may occur with the ordinary forms of strainer, the latter is supported only at its upper end. which is around the periphery of the vertical portion of the digester, while the bottom end is in the form of a funnel which projects into the outlet of the digester.—A. P.-C.

Chlorine Process

Production of Chlorine Pulp. A. R. DeVains. Eng. pat. 197,329, Apr. 30, 1923. Pulp obtained by treating cellulosic materials with chlorine is treated with alkaline or alkaline-earth bases or with alkaline-earth salts of acids weaker than hydrochloric acid, these reagents being added in quesous solution. The hydrochloric acid resulting from the chlorination is thus neutralized and the chlorinated organic products are dissolved.—A. P.-C.

Manufacture of Pulp by the Chlorination Process. P. Waentig. *Papierfabr.* 22, Tech.-Wiss. Teil 45-46 (Feb. 10, 1924). Polemic against W. Schacht, this Journal 21, Tech.-Wiss. Teil 521-526 (Dec. 16, 1923). The necessity for careful control in the chlorination process for manufacturing pulp is emphasized. Chlorine gas, properly used, offers no more difficulties than chlorine water. High copper numbers do not necessarily indicate an excessive chlorination. The author has shown that plant fibers absorb rather definite amounts of chlorine depending upon the lignin content. Dense fibrous material is remarkably resistant towards acids with reference to the quality and yield of the pulp obtained. Alkaline after-treatments decrease the yield by dissolving the incrustations on the fibers. The question as to which process, the De Vains or the Cataldi, can be most profitably employed for the production of pulp depends upon the purpose for which the fiber is to be used.—J. L. P.

DeVains Process for Paper Pulp from Waste Fibrous Materials. J. F. Clerc. *Chem. Met. Eng.* 30, (Feb. 18, 1924); *Paper Trade J.* 78, No. 8, 43-47 (Feb. 21, 1924). A detailed description of the process as actually carried out in practice, with a discussion of its suitability for the production of pulp for fine and medium grades of paper in North America.—A. P.-C.

More About the DeVains Process. James Strachan. *Paper* 33, No. 17, 12-13 (Feb. 14, 1924). A discussion of the suitability of the process for adaptation to existing soda mills, more particularly in Great Britain.—A. P.-C.

Production of Pulp. Max Duttenhufer, Adolf Kampf and Erich Schmidt. Ger. pat. 388, 343. *Papierfabr.* 22, Tech.-Wiss. Teil. 43 (Feb. 3, 1924). The patent covers a process for obtaining pulp from wood by the use of chlorine dioxide prepared from chlorates. The wood is pretreated with 10 per cent sulphuric acid. Pulps are also purified by the same chlorination method.—J. L. P.

Mechanical Process

Voith's "Continuous" Grinder. Erik Palmgren. *Pappers-Och Travaruitid. Finland.* No. 24, Dec. 31, 1923. Round logs of normal and even larger sizes and slabs are kept in continuous contract with the stones. The new elements of the grinder are called "toggle" chains, whereby the wood is carried from the magazine in such a manner that it reaches the surface of the stones in a dense and homogeneous form. The mass of wood is subjected to a constant pressure, and its "projection," as it is called, on the rapidly revolving stones of the Hercules type, is also described as continuous, or in other words there is no unevenness either in the grinding or in the pulp produced. The pulp is said to be remarkably smooth, uniform, and free from knots and slivers. Owing to the fact that logs of from 2 to 4 ft. in length and of large size are quickly reduced to an even fibrous mass, the fibers prove on microscopic examination to be of unusual strength and resistance, or, as the inventor claims, the pulp is adapted to the immediate manufacture of paper without refining. The yield of pulp is consequently the maximum. The advantages claimed for this grinder are: a pulp of long, even fibers, with 50 per cent less waste in slivers than by other machines, economy of power and labor, simplicity of mechanism since it dispenses with presses, stuffing boxes, cocks and apparatus for reversing the pressure. In America the Warren machine is also constructed with a device for continuous grinding; it is provided with chains, but the wood is held by means of hooks. The mechanism of Voith's grinder is shown in six illustrations.—P. B.

Automatic Regulator for Water Wheel Driven Grinders. C. L. Henderson, assignor to Kimberly-Clark Co. U. S. pat. 1,445,883, Feb. 20, 1923. The object of the patent is to provide a regulator which will keep the speed constant within certain limits, prevent excessive speed (which would give lower grade pulp and might cause the stone to burst), and keep the load on the water motor as uniform as possible, thereby giving maximum efficiency for the latter. The governing element consists of a controlling valve interposed at any convenient point in the main pipe which feeds the pressure cylinders of the pockets. This valve is operated by means of differential gears which are driven from the grinder shaft on the one hand and from a constant speed electric motor on the other. If the speed of the grinder rises above the value which the regulator was set to maintain the valve is operated to increase the pressure in the cylinders thereby slowing down the grinder; while if the speed of the latter falls too low the valve is operated to decrease the pressure which speeds up the stone.—A. P.-C.

Hydraulic and Electrical Control of Wood Grinders. Ernst Blau. *Zellstoff U. Papier,* 4, 8-9 (Jan., 1924). The article deals with various hydraulic and electrical grinder controls of German manufacture.—J. L. P.

Discoloration of Groundwood Pulp and of Papers Having High Groundwood Content. Anon. *Papierfabr.* 22, Tech.-Wiss. Teil 23-26 (Jan. 20, 1924). Depending on the kind of wood used, groundwood changes more or less rapidly in color on standing. This may be due to the effect of the air on the sap in the wood, because the action proceeds from the surface to the interior of the pulp. The cutting season probably has a pronounced influence on this change. After several weeks standing in a wet condition and with access to the air, the following freshly made groundwood pulps changed in color: pine, beech, birch and alder. Pulps made from spruce, fir, larch, aspen, linden and maple did not change. Woods, rich in tannic acid, color when exposed to industrial waters containing iron. The discoloration is very intensive when the iron-wet pulp ratio is 1:50,000, and is plainly visible when the ratio is 1:300,000. For the same reason groundwood pulps in contact with iron machinery or pipes discolor. Copper or bronze should replace the iron. The iron content in industrial waters should not be above 0.1 mg. per liter.—G. L. P.

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ACCOUNTANCY AND ITS RELATION TO EFFICIENCY AND PEACE IN INDUSTRY*

By Sir Adam Nimmo, K. B. E.

I am afraid that I shall only utter a number of commonplaces, but I think you will agree with me when I say that it is attention to the commonplaces in industry and business that really tells in the long run, and my desire is in a simple and direct way to cull a few things from the book of experience, which I trust may be helpful to you if they cannot be said to be in any way brilliant or uncommon. It may be said that Accountancy has come to fuller recognition within the last 25 to 30 years. I do not wish to suggest that 30 years ago our industries and our business were conducted in a more or less haphazard way. I do not say that there was less acumen and business ability brought to bear upon them then than there is now, but there has been a steady increasing development on the costing side which has made the administration of a large industrial undertaking today a very different problem than it was 30 years ago.

No doubt this development has taken place as the result of the steady growth and complexity of our industrial system. It has grown under the urgency of the stern necessity created by increasingly severe competition. If a business is to hold its own under the stress of all the economic forces that are bearing upon it today, it requires not only to search out and heal all the weak spots that have shown themselves or are likely to show themselves in connection with it, but to secure that the maximum amount of efficiency is obtained in connection with the working of every unit in operation in the process of production and administration. The fierce public light and criticism that have been brought to bear in recent years upon our industrial and commercial system, while they may be discouraging in certain aspects, have undoubtedly had the effect of leading to the most careful analysis of all the processes of production with the object of eliminating waste and adding to efficiency. Also the increasing difficulties that have had to be encountered in meeting the competition of the world, owing to the increase of technical knowledge and training everywhere, have acted as a spur to the destruction and removal of the obsolete and imperfect and to the introduction of the modern and more efficient.

What Is Industrial Efficiency?

In dealing with "Industrial Efficiency," we require to understand what is meant by that term. I do not profess to give any scientific definition or even a definition which, taken broadly, might not be open to the criticism of incompleteness; but most of us have a fairly clear idea of what efficiency means. We liken in our minds an industrial undertaking to a well-designed and well-fitted piece of machinery. That machinery is made up of many parts each having a function of its own to perform. Each part has been designed and prepared to enable it to perform that function as perperfectly as possible, but each part of the machine can do nothing by itself. Its value is in relation to the whole. The efficiency of the machine depends upon the perfect working of each part in relation to the resultant as a whole; and the nearer that machine comes to the point of doing its work in all its parts, so that the ultimate result for which the machine is designed is almost perfectly and harmoniously secured—to that extent do we regard the machine as a highly efficient machine or otherwise. It is so also in the working of an industrial undertaking. There are many units at work to produce the general result. These units are concerned with their own particular part of the working of the industrial organization. They may not directly be concerned with the final product; but to the extent to which they are performing their own functions with the greatest power of adaptability, regularity and skill, to that extent with the general result of the working of the undertaking approximate to or depart from efficiency. And this applies whether the unit in the process of production is a human factor or a mechanical factor. There are engines and machines in operation which give an ineffective and costly product, just as there are individuals who in their work may be characterized in the same way. Therefore, to secure efficiency in industry it is not only necessary to deal with the human factor, but it is necessary also that the mind should range over the whole of the mechanical factors in operation. Just as in the case of the human factor, waste, loss of time, and poor productivity may be removed, so the same results may be secured in connection with the working of the whole of the mechanical factors that may be in operation. Efficiency will only be secured when the whole of the units in the process of production and administration are so linked together and so made to work in complete co-operation that the business or undertaking as a whole is bound to give the best financial results.

What I have said may not be regarded as a definition in any real sense of "Efficiency," but I think that it presents at once to the mind the fundamental conditions upon which an industrial undertaking, regarded as a machine in operation, may be expected to give what even the most critical mind would regard as relatively efficient results.

* Report of a Lecture delivered to the Scottish Branch of the Inst. of Cost and Works Accountants.

The First Steps Towards Efficiency

Before it is possible to give any true and proper direction to a business undertaking, it is essential that those who are administering it should understand exactly how it stands and what it is doing. The problem presented is to secure efficiency. Before, therefore, it is possible to know whether anything can be done in the direction of increasing efficiency or not it is necessary that one should know what the existing results are, and how they are being built up, and what are the individual factors that are making their contribution to the result as a whole, and whether these individual factors are each contributing their full quota towards the desired result.

The first necessity, therefore, is to spread the undertaking out in all its details, to start at the foundation and analyze carefully every unit at work in the process of production and administration. Today the cost of production of each of these units requires to be taken out by itself and considered in relation to the production of the undertaking as a whole. In the analysis of each unit the question will be constantly raised as to whether the work of that unit is all that can be reasonably expected of it, whether it is mechanical or human, whether the conditions surrounding the working of that unit are the best conditions for it to work in, and whether an improvement in these conditions might not lead to an improvement in the production of the unit. The Administrator will be concerned with methods of operation at every point and he will require to see that he is in possession of the best methods available for the simplification of his mechanical units, just as he will be called upon to examine the methods under which the human labor that he is employing is applied. It is the Cost Accountant's work to spread out the problem, to help the Managing Director or Manager to see exactly what cost is arising from the operation of the various units and whether that cost is too high or can be justified. It is clear that the more knowledge one has of what the detailed results are, the better an understanding one is bound to have of the nature of the problem involved, and there is a better chance of that concentration upon waste or weakness which is essential if improvement is to take place.

Present-Day Cost Sheets

It is at this point that a very marked advance can be shown as compared with the procedure adopted a comparatively short time ago, and there is evidence of an increasing tendency to develop detailed costing to such an extent that there is no part of the process of production and administration that is not being carefully analyzed and sifted with the object of obtaining the best commercial and industrial results. My experience has been confined to the working of the Coal Industry, but in that industry I marvel at the enormous advance that has been made in this direction as compared with our common practice, say, 30 years ago. Whereas then we relied upon comparatively few figures to administrate the results that we were receiving, today in every department of a colliery business the most detailed and minute figures are regularly taken out and these are carefully examined week by week or month by month, so that apart from the actual results obtained any tendencies at work that are having the effect of increasing the cost of production may be investigated and checked. Whereas in years gone by it was the till itself that was largely relied upon to determine whether profits were being made or not, today the results are tabulated after the most minute and detailed process, and at regular intervals the whole working of the undertaking is spread out by means of the figures that are presented.

It is therefore a self-evident proposition to say that this work has a most important bearing upon industrial efficiency. To skill in the taking out of figures in an industry, and the presentation of these figures in their true and proper light, is to a material extent due the increasing efficiency that is presented in the industries of the country today.

How does an up-to-date costing analysis proceed? Let me take the costing at a well-managed colliery as an illustration. First of all there is the works costing. The cost sheet, starting with the underground position, gives the number of men and boys employed, the number of days worked per week, and it shows the output for the week. Then, in separate columns, it takes each separate seam worked, and sometimes each section in each seam, and gives in the first place in respect of the piece-workers the number of tons wrought and the hewing and stripping rate per ton. Then there is the brushing required to carry the necessary roads forward; and if any special stone mining work is required to be done it must also be brought into the cost sheet and separately shown. Then, applicable to each seam or to each section of a seam, it shows the underground oncost necessary to bring the coal to the pit-bottom, and this is added to the other cost per ton. These figures, added together, give the underground cost per ton put on to the cage at the pit-bottom. The surface oncost is then dealt with. The number of men employed on the surface, such as Enginemen, Boiler Firemen, Mechanics, Laborers, Pickers on the picking tables, and so on, is given and a careful analysis is periodically made as to how these men are employed and whether necessarily and effectively employed or not. The total surface wages bill divided by the number of tons raised gives the cost per ton for surface labor. In the case both of surface work and underground work there is always work going on of a special character and this is separately itemized so that attention may be drawn to it and its effect upon costs noted. It may be that the items are of the nature of capital expenditure, in which case they are taken out of the ordinary cost sheet and shown in some separate form. From all this it is at once seen that the greater the amount of costing the more complete is the picture of what is actually going on and the greater the likelihood of spotting fluctuations or irregularities affecting the cost of production. Before the works cost sheet is completed it must show the cost of the clerical and administrative staff at the colliery, and the bringing together of all these figures shows the total cost of production at the colliery. The works' cost sheet also gives the number of man shifts worked so that the important figure of the output per person employed may be readily ascertained. These figures are then sent in to the head office where they are added to by the inclusion of the figures available at the head office, namely the figures applicable to head office administration, general management, stores (which may or may not be costed at the colliery—the practice varying in this respect—taxation (local and imperial), National Health and Unemployment Insurance, Workmen's Compensation, Royalty, surface damages, depreciation, and any other charges that have to be met before the balance between the total cost of production as so brought out and the price realized can be looked upon as profit. From this statement it is at once seen that a modern cost sheet is a detailed analysis of all that goes to make up the total cost of production and involves an enormous amount of costing work which requires to be intelligently and scientifically carried out if it is to be reliable and therefore really useful.

The Analysis of Realized Values

The process of carefully analyzing all the details of costs on the side of production ought to be continued in respect of the values received for the commodity disposed of. In this respect a modern colliery (to take again a colliery as an illustration) is very different from what it was a number of years ago. Whereas formerly there was not a great deal of trouble taken to bring out in detail the realized values received upon the various classes of fuel produced, today each class is treated by itself and the values received are determined in regard to house coal, navigation coal, and all sizes of washed or unwashed smalls. The washeries at the collieries are treated as independent buying units. They purchase from the colliery at the ordinary market prices for the unwashed materials and details are worked out to show how the washery results stand after the washing and sizing processes have taken place, and when the charges for washing and the loss in washing have

been taken into account. The analysis of a washery result has also a very important bearing upon the determination as to whether the colliery itself is working upon efficient lines as the quantity of dirt that is being treated by the washery from day to day shows at once if the man at the face is doing his work efficiently or not and if there is a much larger quantity of first being filled amongst the coal than is reasonable in the circumstances or whether the seam itself is excessively dirty.

The analysis of the various prices received for the different qualities of material will show what, if anything, is gained by the elaborate process of separating and washing as compared with selling the coal in the market as it comes out of the pit, even at a reduced price, and the intelligent salesman, watching the various figures disclosed and referring these figures back to the bedrock position of what the whole product sold has realized, sees whether his policy and practice in the sale of the various qualities of fuel that he is dealing with are sound or whether a modification of such policy and practice would lead to an improvement in the selling price.

It will thus be seen that whether you take one department or another in conection with the administration of a colliery undertaking, there is an enormous amount of costing that requires to be done in order, in the first place, to disclose what the actual facts are in the handling of the undertaking, and then to draw from these facts the right conclusions to enable alterations and modifications to be made in the administration towards securing the best possible results. And what is true of the working of a colliery undertaking is true of the working of any industrial undertaking. In short, the process that is continually at work in the handling of an industrial undertaking efficiently is one of constant analyzing and harmonizing. The first part of the problem must always be to spread it out in all its completeness so that the fullest possible picture may be presented of all that is going on and then to proceed from the facts so disclosed to co-relate each unit to every other unit, and the different units to the whole general result, so that when the process is completed within the physical conditions which must more or less necessarily impose limitations upon administration, the highest practicable efficiency may be secured.

Costing for the Industry

The figures that I have dealt with so far are those applicable to the individual colliery. But the coal industry is distinctive and is in advance of every other industry in this respect in that it provides at stated intervals under what is called a district ascertainment, certain information for the benefit of the workers showing what the results have been upon an average of the whole district in respect of certain items of information mutually agreed to be provided. These results are taken from returns from individual colliery companies and aggregated for the district as a whole. I shall later deal with this aspect of my subject in more detail. In the meantime I am only concerned with the industry as a whole apart from the figures that each company provides for its own use. In the form that provides information for the district ascertainment there are at present 41 items—all of which are available to representatives of both sides, and 23 items are published and made available to the general body of the workers. From the point of view of efficiency (apart altogether from their utility in providing information to the workers as to how the industry stands at any given time) these district figures are useful and valuable, as they lead to a comparison by each of the companies concerned of their own figures with the average figures for the country as a whole, and by so doing they can readily ascertain how their own undertaking stands as compared with the average of the whole, not only in respect of the ultimate result but as regards detailed items of cost. All this is to the good. It will not deter the best from doing better and it acts as a spur to all those at or below the average to improve their results and so secure a higher all round efficiency.

The Spread-Out Valueless Unless Followed Up

Now all this body of figures may be valueless. If they are only taken out and then put upon the files they will do nobody any good. But if they are carefully scrutinized and the lessons drawn from them appreciated and acted upon the ultimate result is highly beneficial. It will lead to higher productivity, to the elimination of waste, and to a cost of production which, efficient in respect of each item, must of necessity give an ultimate result that will represent the highest all round efficiency. And the educative process that goes on is continuous and progressive. A skilled administrator gets to know by rapid experience where to find the pulse of his undertaking. If his financial results are not as satisfactory as he had anticipated he can quickly spot the existing weakness either in lowered productivity or in an excessive burden of oncost relative to productivity or in the lowering of selling prices or in the dozen and one other directions in which financial results may be affected. Without the figures constantly kept up to date, and this is very important, he will find himself in a maze from which he cannot extricate himself. The figures provide him with a chart (and many collieries work out most of their figures by means of charts) from which he can at once see the route that has been followed and the obstacles to successful administration that have barred his way during the period under review.

The conclusion of all this is that while detailed costing figures do not necessarily produce efficiency, without them the highest efficiency is impossible. In this case it is not the more figures the more confusion, but the more figures the greater the information and illumination. Cost accountancy, therefore, has a most important bearing upon efficiency in industry, and those who are responsible for the administration of any large industrial undertaking must always be in the position (if they are bent upon efficient results) of obtaining all the help they can from men who are experts in costing and who appreciate the value of knowing all the detailed results obtained in the working of the industrial machine.

Accountancy and Its Relation to Peace in Industry

Let us now turn to the other part of the subject upon which I am addressing you.

It might be thought on first impressions that there can be little real connection between the processes I have outlined and the development of harmonious relations between employers and the workers. But a little deeper thought will convince us that the relationship is important and may be developed along such lines as ultimately to remove many of the misunderstandings which exist between employers and their workers and which are made the cause of much of the unrest and dissatisfaction that exist today. It may also be found that the greater exposure and use of figures that are vital to the understanding of an industry may ultimately lead to the withdrawal of many of the restrictions and limitations that the trade unions of the country impose upon our industries today, which are not only to the detriment of the national interest but are gravely prejudicial to the particular interests of the workers themselves.

There can be no doubt that ignorance is the mother of unrest, and that if the actual position in the conduct of industry could be more clearly understood, there would be less difficulty in reconciling what appear to be irreconcilable interests, and we might almost hope that by a gradual evolution the workers in industry could be made to understand that their interests really lie at bottom in securing the largest possible amount of freedom in the production of the commodities of industry, and that if such freedom could be secured there would inevitably be a larger fund of money created out of which the wage earner could be more satisfactorily remunerated.

It has to be recognized that at the present time the representatives of labor approach an employer with a large amount of suspicion in their minds as to what the actual facts are that govern

the financial position of our industries. They start with the fundamental idea that there is money enough in practically every industry to give them the wages that they demand, and, further, they believe that the employer receives out of his industry a much larger share of the surplus created within the industry than he is entitled to or is necessary to pay a reasonable return upon the money employed in the industry and also to keep it in a progressive condition.

I have been one of those who for a considerable time have advocated the policy that the large industries of the country would be well advised to disclose to the representatives of the workers all the salient facts surrounding the operations and administration of these industries. I do not mean that the position of an individual company should be dealt with in this way, but I mean that the aggregate financial results of the industry as a whole should be so disclosed so that the men may come to understand what is the amount of money that may be regarded as available for the payment of wages and what the surplus is and whether it may be regarded as being adequate or inadequate for the proper administration of the industry apart from the payment of the wages bill.

As I have already mentioned, we have had some experience of the disclosure of figures in the coal industry, and I think that, so far as we have gone, we can say that that disclosure has been all to the good, subject to a reservation to which I shall refer later. I have already mentioned that in connection with every ascertainment within the coal industry today there is made available to the representatives of the two sides in the industry no less than 41 items. The statements that are conveyed to the workers contain 23 items, and I think that it would be well that you should have the details presented in these ascertainments so that you may see what is the character of the information that is made available to the workers; but kindly keep in mind that, apart from this practical information, there is available the results applicable to individual colleries covering no less than 41 items of information, and this information is open to investigation in any way thought proper to ascertain that the returns have been accurately and properly made.

Rests Upon Actual Money Results

This has followed upon an agreement between employers and workers, which has as its basic consideration that it rests upon actual money results, that there should be a definite and agreed upon division of these money results between the employers and the workers, subject always to the payment of an agreed upon minimum wage to the workers.

In the coal industry therefore are exposed all the material figures that show what money is available in the industry—what share of that money is going to the wages' fund and what share is available for the creation of the surplus out of which profits are paid, reserves created and financial provision made for the carrying on of the industry upon a sound and progressive basis.

As I have said, the disclosure of these figures has been beneficial as leading to a much better understanding of what the actual conditions are that obtain in the industry from time to time. I myself have seen the process of education going on, on the side of the workmen's representatives. At the commencement of the operation of the agreement certain difficulties presented themselves to their minds which have been cleared up and removed. As an illustration of this I may mention that one of the first questions that arose for determination between parties was as to how the items of National Health and Unemployment Insurance and even Workmen's Compensation should be dealt with. The workmen's representatives appear to have formed the erroneous idea that these were charges which were required to be borne by the owners out of their profits. Upon the question, however, being referrd to the independent chairman of the National Board, he at once explained that these of necessity were charges which were required to be borne by the industry before the question of profit arose at all, and we quickly settled down to the adjustment of the figures upon this basis. From that day to this we have never heard anything about such questions, and I am convinced that the workmen's representatives have become satisfied from a further consideration of the incidence of this taxation that the industry must carry the burden and that only after it has carried this burden can it be determined whether there is any surplus available for distribution between the workers and the employers.

Men Fully Satisfied

Another thing that has been made clear from the disclosure of figures in the coal industry is, that the men have been fully satisfied that there is not money in the industry sufficient to meet the demands which were put forward in respect of wages, and that even if they had handed over to them the whole of the profits that the owners have received, these profits could not have given them such additions to their wages as they had anticipated. The clamor of the representatives of the miners for years has been that they should receive fuller information as to the conduct of the industry as a whole than they had been receiving. They believed that if this information was forthcoming it would reveal financial possibilities within the industry from which they could be adequately remunerated. While I do not suggest that they are satisfied today with the information that they receive, they are bound to be satisfied as to the figures representing the total results brought out, and their dissatisfaction today in regard to information is therefore brought within much narrower limits than was previously the case. The production of information has cleared up the position to a very considerable extent. It has, no doubt, led to serious disappointment on the part of the representatives of the workers, but it has at least made this clear, that the workers were grasping at impossibilities and that they were endeavoring to obtain something which in the circumstances the industry could not yield.

An amusing incident in this connection took place at a large district meeting of miners held in a certain part of the country some months ago. When the question was being submitted to the workers as to whether the present agreement should be terminated or not the leader, who was addressing the meeting at the time, appeared to be inclined to a moderate policy and was drawing the attention of the men, in his argument for moderation, to the valuable amount of information which the workers now received under the agreement applicable to the coal industry, when he was interrupted by one of his hearers exclaiming: "We know a sight too much about the industry."

Better Understanding of Methods

But apart from the better understanding of the industry that is being reached today by the publication of figures, there is also a very important aspect of the question that is bound upon maturing consideration to lead to a better understanding of the methods that might be, and ought to be, adopted in order to increase the amount of money available in the industry. For example, an analysis of the figures very quickly shows the important bearing that production has upon financial results. The men at once see that a low production means high costs and a reduced surplus. They begin, therefore, quickly to understand that if they reduce their output per man the wages' fund is bound to be immediately contracted. They, further, begin to appreciate that if there is any waste going on in the production of coal for which they are responsible, this too causes the wages' fund to contract. Of course, they also learn that there are certain items of cost that bear upon the question of wages that are more or less under the control of the employer and, quite naturally, they are disposed to criticize the efficiency of the methods of the employers resulting in certain costs which they believe to be relatively high. All this leads to a better understanding of what the essential problems of industry are in its endeavor to support production and provide a sufficiently large wages' fund to give the workers a fair remuneration.

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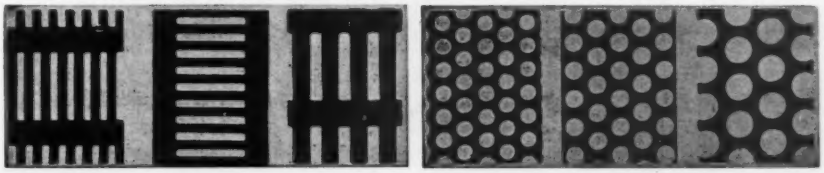

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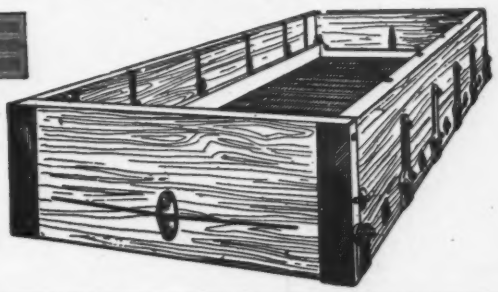

the largest possible volume of production and the lowest cost of production, or anything that bears against the obtaining of the highest market values, is all reflected in the financial results obtained and leads to an increase in or a lowering of wages according as these factors are operating advantageously or disadvantageously.

I think also that the working of the agreement in the coal industry, although perhaps not very freely admitted, is beginning to show the men the effect of the reduction in working hours upon the ability of the industry to support a given wage, and the production of figures is also bound to throw an illuminating light upon all such questions as the amount of and payment for overtime work. What the figures disclose is that the industry in each particular district cannot carry more than a given load without grave detriment to the possible wages that the wage earner may receive and to the amount of employment that he may receive.

Surplus Divided in Given Proportions

The agreement provides for the division of the surplus in the industry in given proportions between the workers and the employers. I do not say that the last word has been uttered as to what the ratio between profits and wages ought to be. That, no doubt, will be the subject of very full consideration, and neither on the one hand can the wage earner expect to receive ultimately more wages than the industry can afford to provide, and at the same time maintain its progressive vitality, nor on the other hand can the employers hope ultimately to take out of the industry by way of profit a larger share than is reasonable and adequate to meet the interest upon the capital that has been laid out upon the industry, together with the sums necessary to provide the necessary initiative and enterprise and development to keep the industry as a whole healthy, sound and progressive.

I believe that the time will come when wages in the large industries of the country will be determined definitely by the financial results which these industries can give. There can be no doubt that in most of these industries at the present time wages are based under the sliding scales of wages that exist, more or less approximately upon financial results; but the relation between wages and profits is not so intimate in these other industries as it is now in the coal industry, and if the workers are to continue to have the suspicion which they harbor in regard to the profits that the employers of industry retain, I think that in the long run that suspicion can be fully removed without disadvantage to the employer, by first of all the disclosure of the essential financial facts bearing upon the conduct of the industry and the fixing of wages at a given ratio of the money results obtained.

I feel confident that one of the advantages that will be gained by the disclosure of figures in industry will be that the workers will develop a better understanding in the first place as to the comparatively small figures that go to represent the profits of the employers and, secondly, as to the place and value of profits in the maintenance and development of the industry, as being so essential if the workers are to have any security for employment and any guarantee that a reasonable standard of living will be secured. Profits will have to be earned, however. Industry may be controlled. It will make no difference whether it is controlled by the state or whether it is controlled by the individual. The only question, therefore, that can be involved is as to what the amount of the surplus after the payment of wages and other costs should be which is to be retained by the employer. That amount will come to be adjusted by the haggle of the market, but I am satisfied of this, that the more understanding the workers have as to the place and value of profits in industry, the more disposed they will be to increase the amount available to the employer if it can be made out of industry at all, and the more they will come to see how vitally their own interests are bound up with the employers and with the industrial position as a whole from the point of view of the profitableness or unprofitableness of the industry.

COST SECTION

New York Trade Jottings

J. E. Willert, secretary and treasurer of the American Association of Paper Specialty Manufacturers, left this week for a two weeks' vacation.

* * *

A large attendance of members is looked for at the meeting of the Waxed Paper Association to be held at the Hotel McAlpin next Tuesday.

* * *

The Equitable Paper Bag Company of 308 Scholes street, Brooklyn, N. Y., is extending its line to include open end die cut merchandise envelopes. The paper mill of this concern is located at Bellows Falls, Vermont.

* * *

As the result of an all-day conference with the division of mediation and arbitration of the New York State Department of Labor, the strike of 2,500 paper box makers, scheduled to take place this month was averted by the signing of a new agreement which will operate until September 30, 1926. Certain working conditions are adjusted and holiday payments are made.

* * *

The Armstrong Machine Works of Three Rivers, Mich., has just issued a new catalogue which shows the many features as well as the operation of the Amstrong Steam Trap. Otto Goeppinger, formerly associated with the Kimberly-Clark Company and the American Voith Contact Company, New York, is now connected with this company, specializing in paper and pulp mill equipment.

* * *

The Salesmen's Association of the Paper Industry, which is holding a monthly luncheon during the Summer months instead of the usual weekly luncheon, had their July session at Hotel Belmont on Monday with a good attendance of members. Those present expressed their opinions of present trade conditions and agreed that there would be an earlier resumption of Fall business than they have been figuring on.

* * *

"International Paper common at 56⅝ made a new high for the year," said the *Wall Street Journal* Wednesday.. "Since October 31, 1923, on a turnover of 287,800 shares, International Paper has more than doubled its market price. On that date a low record for the last five years was reached at 27⅛. Turnover in the stock in the last 8½ months represents a little less than 1½ times the 199,319 shares of outstanding common stock. It has been a matter of common knowledge for some time that the floating supply of International Paper was small, but its recent rise on an extraordinarily small turnover clearly demonstrates the closeness with which it is held."

* * *

"Significance of the buying is illustrated by the fact that 144,800 shares of International Paper changed hands since the new management took office on May 29, last. Trading in the last six weeks, when the stock rose to 56⅝ from 42½, was 50 per cent of the total since October 31, 1923. The company is expected to come into the market soon for around $10,000,000 additional capital with which to carry out its expansion program. Proceeds of such a bond issue will probably be expended in the establishment of new news print machines or an additional mill in Canada.

At present, four of International Paper's news sprint mills in this country are closed down for an indefinite preiod. Overproduction of this commodity by Canadian and United States mills is the assigned reason for this action. International Paper's bank loans, it is understood have been reduced to around $7,500,000, comparing with $11,760,000 on December 31, last."

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NEW YORK IMPORTS

WEEK ENDING JULY 12, 1924

SUMMARY

News Print.....2577 rolls
Printing Paper.....452 rolls, 132 cs., 43 bls.
Wallpaper .....18 cs., 6 bls.
Wrapping .....269 rolls, 290 bls., 21 cs.
Kraft .....41 pgs.
Surface Coated Paper.....43 cs.
Filter Paper .....122 cs.
Writing .....18 cs.
Colored-Paper .....11 cs.
Photo Paper .....2 cs.
Tissue Paper .....56 cs.
Cigarette Paper.....85 cs.
Packing Paper .....275 bls., 24 cs.
Baryta Coated Paper.....103 cs.
Tracing Paper .....5 cs.
Paperboard .....20 cs.
Miscellaneous Paper..38 cs., 83 bls., 256 rolls, 8 pgs.

CIGARETTE PAPER

F. P. Gaskell & Co., Vincent, Havre, 30 cs.
Standard Products Corp., by same, 55 cs.

WALL PAPER

F. J. Emmerich, Cedric, Liverpool, 1 bl.
F. J. Emmerich, Baltic, Liverpool, 4 bl.
F. J. Emmerich, by same, 2 cs.
Whiting & Patterson, Berengaria, Havre, 9 cs.
A. C. Dodman, Jr., Inc., Montauk, Antwerp, 4 cs.
A. C. Dodman, Jr., Inc., by same, 1 bl.
Phoenix Shipping Co., Westphalia, Hamburg, 3 cs.

WRAPPING PAPER

Wilkinson Bros. & Co., Inc., Orbita, Hamburg, 202 bls.
Republic Bag & Paper Co., Y. Maru, Hamburg, 269 rolls.
Roberts, Cushman Co., Duilio, Genoa, 2 cs.
Fernstrom Paper Co., Inc., Westphalia, Hamburg, 88 bl.
F. Strezeski, McKeesport, Rotterdam, 5 cs.
F. C. Strype, Volendam, Rotterdam, 6 cs.
Steffens, Jones & Co., by same, 8 cs.

PACKING PAPER

Bowater Paper Co., Pittsburgh, Hamburg, 14 cs.
J. P. Hefernan Paper Co., Westphalia, Hamburg, 275 bls.
Judson Freight Forwarding Co., Homeric, Havre, 10 cs.

WRITING PAPER

Judson Freight Forwarding Co., Homeric, Havre, 3 cs.
Guibout Freres, by same, 10 cs.
Coenca, Morrison & Co., by same, 5 cs.

FILTER PAPER

National American Bank, Westphalia, Hamburg, 3 cs.
E. Fougeria & Co., Berengaria, Bordeaux, 109 cs.

BARYTA COATED PAPER

Globe Shipping Co., America, Bremen, 51 cs.
Globe Shipping Co., S. Ventana, Bremen, 52 cs.

PHOTO PAPER

J. J. Gavin, Baltic, Liverpool, 2 cs.

PRINTING PAPER

Drinhausen, Hollkott Paper Co., Orbita, Hamburg, 76 rolls.
Seaman Paper Co., by same, 114 rolls.
Melchior, Armstrong & Dessan, Pittsburgh, Hamburg, 11 cs.
M. O'Meara Co., by same, 23 bls.
Seaman Paper Co., by same, 20 bls.
J. H. Scott Paper Co., by same, 175 rolls.
B. F. Drakenfeld & Co., Cedric, Liverpool, 26 cs.
Globe Shipping Co., Montauk, Antwerp, 75 cs.
Drinhausen, Hollkott Paper Co., Westphalia, Hamburg, 87 rolls.
B. F. Drakenfeld & Co., Baltic, Liverpool, 20 cs.

NEWS PRINT

Bowater Paper Co., Pittsburgh, Hamburg, 48 rolls.
Chemical National Bank, by same, 188 rolls.
Chemical National Bank, Westphalia, Hamburg, 85 rolls.
Drinhausen, Hollkott Paper Co., by same, 156 rolls.
Parsons & Whittemore, S. Ventana, Bremen, 766 rolls.
Chemical National Bank, Carlsholm, Narrkoping, 768 rolls.
Chemical National Bank, Carlsholm, Hallstavik, 289 rolls.
M. Gottesman & Co., Inc., by same, 277 rolls.

SURFACE COATED PAPER

Gevaert Co. of America, Montauk, Antwerp, 43 cs.

COLORED PAPER

C. W. Williams, Montauk, Antwerp, 11 cs.

TISSUE PAPER

Meadows, Wye & Co., Cedric, Liverpool, 17 cs.
Meadows, Wye & Co., Baltic, Liverpool, 10 cs.
F. C. Strype, by same, 29 cs.

TRACING PAPER

E. Dietzgen & Co., Y. Maru, Hamburg, 5 cs.

PAPER BOARD

Wilkinson Bros. & Co., Inc., Orbita, Hamburg, 20 cs.

KRAFT PAPER

W. Hartmann & Co., Pittsburgh, Hamburg, 41 pgs.

PAPER

Wilkinson Bros. & Co., Inc., Orbita, Hamburg, 48 bls.
Wilkinson Bros. & Co., Inc., by same, 26 rolls.
Street & Smith, by same, 91 rolls.
International Acceptance Bank, by same, 28 rolls.
Traders Paper Co., by same, 19 rolls.
Manhattan Paper Co., Westphalia, Hamburg, 92 rolls.
Import Paper Co., by same, 8 pgs.
Martin & Bechtold, S. Ventana, Bremen, 29 bls.
J. J. Bernitz, McKeesport, Rotterdam, 6 cs.
Kolesch & Co., Volendam, Rotterdam, 7 cs.
P. J. Schweitzer, La Savoie, Havre, 25 cs.
Favor, Ruhl & Co., Duilio, Genoa, 6 bls.

RAGS, BAGGING, ETC.

Salomon Bros. & Co., Vincent, Dunkirk, 7 bls. rags.
R. Bishop Man'f'g. Co., by same, 203 bls. rags.
Albion Trading Co., by same, 151 bls. rags.
National City Bank, Y. Maru, Hamburg, 48 bls. rags.
Darmstadt, Scott & Co., by same, 56 bls. rags.
M. O'Meara Co., E. Victor, Antwerp, 31 bls. cotton waste.
E. J. Keller Co., Inc., by same, 38 bls. rags.
S. Birkenstein & Sons, by same, 108 bls. rags.
J. Lang Paper Co., Westphalia, Hamburg, 118 bls. rags.
E. J. Keller Co., Inc., by same, 639 bls. rags.
F. Salomon & Co., by same, 53 bls. rags.
Castle & Overton, Rhode Island, Dundee, 126 bls. twine.
National City Bank, America, Bremen, 54 bls. rags.
E. J. Keller Co., Inc., Lucia, Trieste, 61 bls. rags.
Goldman, Sachs & Co., S. Ventana, Bremen, 239 bls. rags.
A. Darden, Pastores, Havana, 52 bls. rags.
E. J. Keller Co., Inc., Skipsea, Marseilles, 37 bls. rags.
E. J. Keller Co., Inc., Skipsea, Barcelona, 128 bls. bagging.
A. W. Fenton, Inc., Volendam, Rotterdam, 291 bls. rags.
E. J. Keller Co., Inc., by same, 308 bls. rags.
Katzenstein & Keene, Inc., by same, 149 bls. rags.
Katzenstein & Keene, Inc., American Shipper, London, 116 bls. rags.
Castle & Overton, Rochambeau, Havre, 36 bls. rags.
Castle & Overton, by same, 57 bls. bagging.
Castle & Overton, Anaconda, Rotterdam, 267 bls. rags.
Castle & Overton, Lancaster, Japan, 40 bls. rags.
E. J. Keller Co., Inc., F. Maru, Leghorn, 149 bls. rags.
E. J. Keller Co., Inc., D. Dollar, Kobe, 150 bls. rags.
E. J. Keller Co., Inc., Rotterdam, Amsterdam, 48 bls. rags.
E. J. Keller Co., Inc., Caucasier, Antwerp, 155 bls. bagging.
E. J. Keller Co., Inc., Huronian, Antwerp, 116 bls. flax waste.

OLD ROPE

E. J. Keller Co., Inc., Laura, Trieste, 40 coils.
Brown Bros. & Co., Montauk, Antwerp, 103 coils.
Brown Bros. & Co., Westphalia, Hamburg, 49 coils.
Brown Bros. & Co., McKeesport, Rotterdam, 67 coils.
Wm. Schall & Co., Skipsea, Barcelona, 36 coils.
Anglo South American Trust Co., Skipsea, Genoa, 360 coils.
Brown Bros. & Co., Volendam, Rotterdam, 261 coils.

CASEIN.

Kalbfleisch Corp., So. Cross, Buenos Aires, 343 bgs.

WOOD PULP

J. Andersen & Co., Y Maru, Hamburg, 150 bls., 30 tons.
Hartig Pulp Co., by same, 250 bls., 51 tons.
Castle & Overton, America, Bremen, 411 bls.
H. Hellesen, Inc., by same, 250 bls., 50 tons.
Bulkley, Dunton & Co., S. Ventana, Bremen, 2,075 bls.
J. Andersen & Co., by same, 625 bls.

KRAFT PULP

Johanesson, Wales & Sparre, Inc., Drottningholm, Gothenburg, 125 bls.

WOOD PULP BOARD

Wilkinson Bros. & Co., Orbita, Hamburg, 22 cs.

BALTIMORE IMPORTS

WEEK ENDING JULY 12, 1924

American Mills Co., Y. Maru, Hamburg, 23 rolls wrapping paper.
M. W. Pryor, by same, 35 cs. crepe paper.
Melby, Kuttroff & Co., Carlsholm, Gothenburg, 51 bls. paper.
Chemical National Bank, by same, 26 bls. paper.
Chemical National Bank, by same, 888 rolls paper.
The Congoleum Co., Vincent, Dunkirk, 206 bls. rags.
Hornell, Donaldson, Inc., Y. Maru, Hamburg, 1,815 bls., 304 tons wood pulp.
Hartig Pulp Co., by same, 375 bls., 77 tons wood pulp.
Johanesson, Wales & Sparre, Inc., Betty Maersk, Frano, 5,250 bls. kraft pulp.
Johanesson, Wales & Sparre, Inc., Kramfors, 2,358 bls. sulphite pulp.
Johanesson, Wales & Sparre, Inc., Carlsholm, Gothenburg, 1,215 bls. kraft pulp and 250 bls. sulphite pulp.
Johanesson, Wales & Sparre, Inc., Denmark Maru, Sundsvall, 700 bls. sulphite pulp.

BOSTON IMPORTS

WEEK ENDING JULY 12, 1924

Boston Production Co., Carlsholm, Hallstavik, 1,364 rolls news print.
J. Anderson & Co., Carlsholm, Gothenburg, 1,750 bls. sulphite pulp.
Scandinavian Pulp Agency, Inc., by same, 5,080 bls. kraft pulp.
Scandinavian Pulp Agency, Inc., by same, 105 bls. sulphate pulp.
The Borregaard Co., by same, 125 bls. dry pulp.
Castle & Overton, ———, Germany, 140 bls. wood pulp.
Castle & Overton, Bilderdyk, Rotterdam, 35 bls. rags.

(Continued on page 58)

The Home of Quality

FACTORY
132ND TO 133RD ST. & BROOK AVE.

PAPER BAGS and SACKS

GLASSINE BAGS—SPECIALTIES

Operating a Modern Printing Plant

This Registered Trade Mark Octagon

on a Paper Bag vouches for Its Good Quality

SCHORSCH & CO.

Manufacturers *Established 1901*

500 East 133d Street . New York

The

St. Regis Paper Company

and the

Hanna Paper Corporation

Daily Capacity, 425 Tons

Newsprint
Butchers' Manila
Packers' Oiled Manila
Jute Container Board
Ground Wood and Unbleached Sulphite

Manufacturers of

TARZAN Fibre Shipping Cases

General Sales Offices:

30 East 42nd St. New York
CHICAGO PITTSBURGH
620 McCormick Bldg. 1117 Farmers Bank Bldg.

THE WORLD'S LARGEST PACKERS

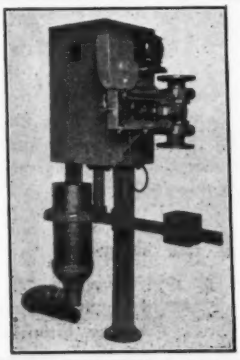
ANY GRADE QUANTITY

RAGS

and

Paper Stock

GUMBINSKY BROS. CO.
UNION & LUMBER STREETS
CHICAGO, ILL.



When your competitor had variations in QUALITY and WEIGHTS

He bought

TRIMBEY AUTOMATIC CONSISTENCY REGULATORS

For ALL of his Machines.

Why don't YOU try one? *Ask us about them.*

Also "Made in Canada"

TRIMBEY MACHINE WORKS, Glens Falls, N. Y.

Imports of Paper and Paper Stock

(*Continued from page 56*)

E. J. Keller Co., Inc., F. Bulow, Hamburg, 109 bls. rags.

Bemis Bros. Bag Co., Westlake, Liverpool, 120 bls. paper stock.

G. M. Graves Co., Burgendyk, Rotterdam, 98 bls. rags.

Train, Smith & Co., Valemore, Liverpool, 113 bls. waste paper.

American Express Co., West Nosska, Liverpool, 11 bls. rags.

E. Butterworth & Co., Inc., Ossa, Alexandria, 217 bls. rags.

E. Butterworth & Co., Inc., Darian, Manchester, 130 bgs. hide cuttings.

Train, Smith & Co., by same, 137 bls. rags.

Train, Smith & Co., by same, 235 bgs. hide cuttings.

Train, Smith & Co., Darian, Liverpool, 68 bls. bagging.

E. Butterworth & Co., Inc., by same, 41 bls. rags.

G. M. Graves Co., Nevisian, Liverpool, 246 bls. rags.

C. H. Dexter & Sons, Inc., by same, 34 bls. rags.

International Purchasing Co., Burgerdyk, Rotterdam., 69 pkgs. old rope.

International Purchasing Co., Nevisian, Liverpool, 125 pkgs. old rope.

International Purchasing Co., London Corp'n, Liverpool, 48 pkgs. old rope.

Bemis Bros. Bag Co., by same, 149 pkgs. old rope.

J. Spaulding & Sons, Valemore, Liverpool, 13 pkgs. old rope.

Bemis Bros. Bag Co., by same, 180 pkgs. old rope.

Train, Smith & Co., Darian, Liverpool, 47 pkgs. old rope.

PHILADELPHIA IMPORTS

WEEK ENDING JULY 12, 1924

S. Birkenstein & Sons, E. Victor, Antwery, 37 bls. rags.

L. H. Abenheimer, by same, 143 bls. rags.

E. Butterworth & Co., Inc., by same, 43 bls. rags.

Castle & Overton, by same, 45 bls. rags.

Castle & Overton, Skipsea, Marseilles, 342 bls. rags.

Brown Bros. & Co., by same, 280 bls. rags.

Katzenstein & Keene, Inc., by same, 41 bls. rags.

A. Brown & Sons, by same, 153 bls. rags.

E. J. Keller Co., Inc., by same, 133 bls. rags.

Bank of New York, Skipsea, Barcelona, 67 bls. rags.

L. H. Abenheimer, by same, 128 bls. rags.

D. M. Hicks, by same, 57 bls. rags.

New York Trust Co., by same, 129 bls. rags.

Katzenstein & Keene, Inc., M. Merchant, Manchester, 73 bls. new cuttings.

E. J. Keller Co., Inc., F. Bulow, Hamburg, 724 bls. rags.

E. J. Keller Co., Inc., Bilderdyk, Amsterdam, 198 bls. rags.

E. J. Keller Co., Inc., Bilderdyk, Rotterdam, 494 bls. rags.

Castle & Overton, by same, 871 bls. rags.

Castle & Overton, Glasgow Maru, Hamburg, 79 bls. rags.

NEW ORLEANS IMPORTS

WEEK ENDING JULY 12, 1924

Castle & Overton, Kentucky, Havre, 520 bls. rags.

Castle & Overton, Edam, Rotterdam, 32 bls. rags.

To Ontario, Canada:

Kalbfleisch Corp., So. Cross, Buenos Aires, 667 bgs. casein.

NORFOLK, VA., IMPORTS

WEEK ENDING JULY 12, 1924

Lagerloef Trading Co., Eastern Star, 325 tons chemical pulp.

PHILADELPHIA PRICE TENDENCY BETTER

(*Continued from page 30*)

pany acting as host of the meeting. In his talk on paper conditions president Thomas said that the present conditions were in his mind merely transient in character and that while it was true there was no great activity in buying he was nonetheless of opinion that those who looked on the dark side had been making comparisons with rushed seasons of past years and that if their judgment was based on a comparison with what properly was normal for this time there would be little complaint. Certainly the look ahead, he said, was one of promise and of certain returns for those who went after business hard enough.

Graphic Arts Business Expands

So great has been the patronage of the fine paper distributors of the services of the Graphic Arts' Bureau, conducted by the Paper Trade Association jointly with the Typothetæ that there has been necessitated employment of an extra full time clerk.

Pusey and Jones Gloucester Plant Sold

Sale of the Gloucester City plant of the Pusey & Jones Company, which was given over to the building of ships during the war days was approved last week by Judge Lynch of the United States District Court sitting in Newark, N. J. The purchasers were a syndicate of capitalists headed by Henry J. Ford, with offices in the Widener building in this city and Mayor McNally of Gloucester with a low bid of $516,000 for the property. The company has been in receivers' hands for three years. The sale resulted from legal action by the city of Gloucester authorities who wanted taxes due the city. A ten-day limit is set for the payment of the consideration.

Sails for Ad Club Convention

Among the 160 members of the Poor Richard Club of Philadelphia, made up of advertising men who sailed last week on the steamer *Republic* for the international convention of the Advertising Clubs of the World to be held in London beginning this week, was president Norbert A. Considine of the Paper House of Pennsylvania, who was accompanied by Mrs. Considine. Mr. Considine, who is also vice-president of the Poor Richard Club, was given a rousing send-off by friends.

News Notes of the Trade

Sylvester Garrett, Jr., 13-year-old son of Sylvester S. Garrett, had a narrow escape from serious injury on July 4th when an aerial bomb shot off by a boy friend was exploded with such force that it blew him more than five feet from the spot where the explosion occurred, and resulted in the loss of the hand and shattered the knee of his playmate.

Alfred C. Holland, manager of the Garrett Company has returned to headquarters from a two week's trip to the Blue Ridge Mountains in Pennsylvania.

Sylvester S. Garrett leaves this week for a month's sojourn with his family at Atlantic City where he will make his headquarters at the Ambassador Hotel.

Chicago Salesmen to Have Outing

CHICAGO, July 14, 1924.—The Chicago Division of the Salesmen's Association of the Paper Industry is planning for a mid-summer outing, on July 22, when there will be a day of outdoor sports, followed by a dinner in the evening, and according to present plans, the outing will be on a scale commensurate with the recent fine party of the New England Division at Stockbridge, Mass.

R. H. Harbison is working on the detailed plans, and has arranged for the entire party to be the guests of the Olympia Golf Fields for the day, with a luncheon at noon, and various sports, especially golf, in the forenoon and afternoon.

According to these plans, there will be a charge of $10 as a lump sum to cover the luncheon, dinner and grounds fees, and advance word is that there will be a large attendance of salesmen from all parts of the Middle West. As in the case of the New England outing, the members of the Association from the entire country are being invited to attend, and to bring guests, if they can arrange to be in the Middle West at the time of this affair.

Winter Paper Stock Co. Burned

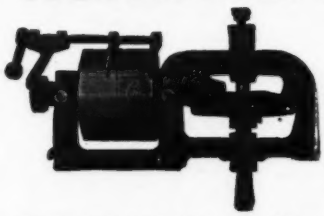
LOUISVILLE, Ky., July 12, 1924.—The destruction by fire last week of the four-story brick building and its contents caused a loss last week to the Winter Paper Stock Company, estimated at $80,000.

Paper that Passes the Keenest Inspection

—is the paper made with the aid of our TYPE "B" IRON EXTRACTOR. This device removes not only the iron from the paper stock but other foreign substances. It never fails to satisfy in obtaining 100% perfect results, its low cost of operation, its compactness, etc., are factors that have placed this device in over one hundred paper mills throughout the country. Write us for complete details.

THE ROLAND T. OAKES CO.
Established 1885
HOLYOKE, MASS.
Electrical Specialists

AGITATOR DRIVES



Six Stock Sizes
Special Designs
"NETT-CO" line
is complete from
smallest to largest.

NEW ENGLAND TANK & TOWER CO.
30 CHURCH ST., N. Y. EVERETT, MASS.

Buchanan & Bolt Wire Co.
HOLYOKE, MASS.
Since 1878.

Fourdrinier Wires

Dandy Rolls

Cylinder Covers **Best Quality Always**

NORWOOD
PAPER FINISHING MACHINERY
Write for Information

NORWOOD ENGINEERING CO.
Florence, Mass., U. S. A.

Cycloidal Vacuum Pumps
make Suction Rolls more efficient.
Manufactured by
The Connersville Blower Co.
Connersville, Ind.

The Paper Trade Journal's Want Column will get rid of that surplus material you have on hand.
Others have tried it with great success. Why not you?

A Remarkable Range of Grades, Textures and Weights

Orr Endless Felts can now be obtained up to 86 feet in length.

With our enlarged new equipment we can now furnish Paper Manufacturers with endless felts up to 86 feet in length.

Paper Manufacturers who carefully check manufacturing costs, and also strive to produce more and better paper at a lower cost per ton, prefer the unvarying quality and long service of ORR felts. A trial of them will bring about a preference that will be lasting.

THE ORR FELT & BLANKET COMPANY, Piqua, Ohio

Market Quotations

PAPER SECURITIES CLOSING PRICES TUESDAY

Reported by Stewart Tuttle & Co., Inc., 120 Broadway, New York

Stocks	BID	ASKED
Abitibi Power and Paper Company, Ltd.	56	57
Abitibi Power and Paper Company, Ltd, Pfd.	99	101
American Writing Paper Company, Pfd.	5½	6½
Brompton Pulp and Paper Company, Ltd.	30	31
Donnacona Paper Company, Ltd.	45	50
Donnacona Paper Company, Ltd., Pfd.	98	100
International Paper Company	58¾	59¼
International Paper Company, Pfd.	72½	73½
Laurentide Company, Ltd.	85½	86
Price Brothers	40	41
St. Maurice Paper Co., Ltd.	85	89
Smith (Howard) Paper Mills, Ltd.	40	41
Spanish River Pulp and Paper Mills, Ltd.	105¼	105½
Spanish River Pulp and Paper Mills, Pfd.	112⅜	112½
Union Bag and Paper Corp.	49	51
Wayagamack Pulp and Paper Company, Ltd.	33	35
West Virginia Pulp and Paper Company	50	54

Bonds	BID	ASKED
Abitibi Power and Paper Company, Ltd., 1st 6s, 1934	99	101
Abitibi Power and Paper Company, Ltd., Gen. 6s 1940	93	95
Abitibi Power and Paper Company, Ltd., Con. 8s 1931	102½	103¼
Belgo Canadian Paper Company, 1st 6s 1943	94	95
Brown Company Serial 6s	99	100
Carthage Sulphite Pulp and Paper Company, 1st 8s 1941	35	50
Continental Paper and Bag Mills Corporation, 1st and Ref. 6½s, Series "A," 1944	90	92½
Donnacona Paper Company, Ltd., 1st 6s 1940	97	100
Eddy Paper Company, 1st 7½s 1931	96½	98½
Gair (Robert) Company, 1st 7s 1937	96½	97½
International Paper Company, 1st and Ref. 5s (Series "B") 1947	86	86¼
Mattagami Pulp and Paper Company, 1st 6s 1937	58	60
Mattagami Pulp and Paper Company, 1st 7s 1949	20	25
Oswego Falls Corporation, 1st 8s 1942	101½	102
Oxford Paper Company, 1st and Ref. 6s (Series "A") 1947	98	100
Parker, Young Company, 1st 6½s 1944	95½	97½
Paterson Parchment Paper Company, 1st 6s (Series "A") 1938	96	97
Peshtigo Paper Company, 1st 7s (Series "B") 1942	92	94½
Price Bros. & Co., Ltd., 1st 6s (Series "A") 1943	97¾	98¾
Provincial Paper Mills, Ltd., 1st 6s 1940	98	100
Riordon Pulp and Paper Company, Ltd., Gen. 6s 1929	16	19
Riordon Pulp and Paper Company, Ltd., 6s 1942	80	84
Riordon Company, Ltd., 1st and Ref. 8s 1940	83¼	84
River Raisin Paper Company, 1st 8s 1936	103½	104½
Smith (Howard) Paper Mills, Ltd., 6s 1934	95	95½
Smith (Howard) Paper Mills, Ltd., 1st Ref. 7s 1941	94	96
Spanish River Pulp and Paper Mills, Ltd., 1st 6s 1931	101	103
Spanish River Pulp and Paper Mills, Ltd., Gen. 8s 1941	102¾	103¾
Wayagamack Pulp and Paper Company, Ltd., 1st 6s 1951	74	77

Paper

F. o. b. Mill

Ledgers	11.00	@38.00
Bonds	9.00	@45.00
Writings—		
Extra Superfine	14.00	@30.00
Superfine	14.00	@30.00
Tub Sized	10.00	@15.00
Engine Sized	8.00	@11.00
News—		
Rolls, contract	3.65	@ 3.90
Rolls, transit	3.75	@ 4.25
Sheets	4.15	@ 4.40
Side Runs	3.00	@ 3.50
Book, Cased—		
S. & S. C.	7.25	@ 9.00
M. F.	7.10	@ 8.85
Coated and Enamel	9.00	@14.00
Lithograph	9.00	@14.00
Tissues—		
White No. 1	.75	@ .76
White No. 2	.70	@ .80
Colored	1.05	@ 1.90
Anti-Tarnish	1.35	@ 1.90
Kraft	.85	@ 1.10
Manila	.75	@ .80
Kraft—		
No. 1 Domestic	5.50	@ 6.25
No. 2 Domestic	5.00	@ 5.75
Imported	4.75	@ 5.20
Manila—		
No. 1 Jute	7.50	@ 9.00
No. 2 Jute	7.75	@ 8.50
No. 1 Wood	4.75	@ 5.25
No. 2 Wood	4.00	@ 4.50
Butchers	3.50	@ 4.00
Fibre Papers—		
No. 1 Fibre	5.50	@ 5.75
No. 2 Fibre	4.75	@ 5.25
Common Bogus	2.40	@ 2.60
S. Screening	3.25	@ 3.75
Card Middles	4.00	@ 5.00

Boards—per ton—		
News	40.00	@55.00
Straw	40.00	@45.00
Chip	37.50	@42.50
Binders' Boards	70.00	@75.00
Sgl. Mla. Ll. Chip	50.50	@55.50
Wood Pulp	70.00	@75.00
Container	57.50	@65.00
Sulphate Screenings—		
Coarse	.80	@ .90
Refined	1.75	@ 2.00
Ground Wood—		
Screenings	20.00	@25.00
Glassine—		
Bleached, basis 25 lbs.	12.00	@15.00
Bleached, basis 20 lbs.	14.00	@17.00

Mechanical Pulp

(Ex-Dock)

No. 1 Imported	35.00	@40.00

(F. o. b. Mill)

No. 1 Domestic	27.50	@34.00

Chemical Pulp

(Ex-Dock, Atlantic Ports)

Sulphite (Imported)—		
Bleached	3.75	@ 4.50
Easy Bleaching	2.90	@ 3.10
No. 1 strong unbleached	2.60	@ 2.80
No. 2 strong unbleached	2.20	@ 2.40
No. 1 Kraft	2.50	@ 2.85
Sulphate—		
Bleached	3.50	@ 3.65

(F. o. b. Pulp Mill)

Sulphite (Domestic)—		
Bleached	3.50	@ 4.50
Easy Bleaching Sulphite	2.50	@ 2.90
News Sulphite	2.40	@ 2.60
Mitscherlich	3.00	@ 3.75
Kraft (Domestic)	2.50	@ 2.80
Soda Bleached	3.90	@ 4.10

Domestic Rags

New Rags

Prices to Mill, f. o. b. N. Y.

Shirt Cuttings—		
New White, No. 1	13.00	@13.50
New White, No. 2	6.25	@ 6.75
Silesias, No. 1	7.50	@ 8.00
New Unbleached	10.50	@11.00
Washables	5.50	@ 6.15
Fancy	6.50	@ 7.00
Blue Overall	8.00	@ 8.50
New Blue	5.50	@ 6.00
New Black Soft	4.65	@ 5.15
New Light Seconds	3.00	@ 3.25
O. D. Khaki Cuttings	4.75	@ 5.00
Men's Corduroy	4.00	@ 4.25
New Canvas	7.00	@ 7.50
New Black Mixed	2.75	@ 3.00

Old Rags

White, No. 1—		
Repacked	6.50	@ 7.00
Miscellaneous	5.50	@ 5.75
White, No. 2—		
Repacked	4.25	@ 4.50
Miscellaneous	3.75	@ 4.00
St. Soiled, White	2.80	@ 3.00
Thirds and Blues—		
Repacked	3.62½	@ 3.87½
Miscellaneous	2.90	@ 3.15
Black Stockings	3.75	@ 4.00
Roofing Rags—		
Cloth Strippings	1.90	@ 2.00
No. 1	1.90	@ 2.00
No. 2	1.80	@ 1.90
No. 3	.90	@ 1.00
No. 4	.90	@ 1.00
No. 5A	1.50	@ 1.60

Foreign Rags

New Light Silesias	7.50	@ 8.75
Light Flannelettes	8.00	@ 8.25
Unbl'chd Cottons	9.00	@ 9.50
New White Cuttings	11.50	@12.50
New Light Oxfords	7.75	@ 8.25
New Light Prints	7.25	@ 7.75
New Mixed Cuttings	3.25	@ 3.75
New Dark Cuttings	3.00	@ 3.50
No. 1 White Linens	9.00	@10.00
No. 2 White Linens	7.00	@ 8.00
No. 3 White Linens	6.00	@ 6.50
No. 4 White Linens	4.50	@ 5.50
Old Extra Light Prints	4.00	@ 4.50
Ord. Light Prints	3.00	@ 3.50
Med. Light Prints	2.40	@ 2.50
Dutch Blue Cottons	3.50	@ 4.00
Ger. Blue Cottons	3.00	@ 3.25
Ger. Blue Linens	3.50	@ 4.00
Checks and Blues	2.25	@ 2.50
Dark Cottons	1.50	@ 1.75
Shoppery	1.40	@ 1.60
French Blues	3.25	@ 3.75

Bagging

Prices to Mill F. o. b. N. Y.

Gunny No. 1—		
Foreign	1.60	@ 1.70
Domestic	1.55	@ 1.65
Wool, Tares, light	1.40	@ 1.50
Wool, Tares, heavy	1.40	@ 1.50
Bright Bagging	1.15	@ 1.25
Sound Bagging	.90	@ 1.00
Manila Rope—		
Foreign	6.25	@ 6.50
Domestic	6.50	@ 6.75
New Bu. Cut	2.40	@ 2.60
Hessian Jute Threads—		
Foreign	2.40	@ 2.60
Domestic	2.10	@ 2.20

Old Waste Papers

(F. o. b. New York)

Shavings—		
Hard, White, No. 1	3.25	@ 3.60
Hard, White, No. 2	2.90	@ 3.10
Soft, White, No. 1	2.50	@ 2.70
Flat Stock—		
Stitchless	1.30	@ 1.40
Over Issue Mag.	1.40	@ 1.50
Solid Flat Book	1.20	@ 1.30
Crumpled No. 1	1.90	@ 1.00
Solid Book Ledger	1.80	@ 1.90
Ledger Stock	1.30	@ 1.40
New B. B. Chips	.50	@ .55
Manilas—		
New Env. Cut	2.45	@ 2.55
New Cut. No. 1	1.65	@ 1.90
Extra No. 1 old	1.30	@ 1.40
Print	.80	@ .90
Container Board	.55	@ .65
Bogus Wrapper	.60	@ .70
Old Krafts Machine compressed bales	1.65	@ 1.75
News—		
No. 1 White News	1.65	@ 1.75
Strictly Overissue	.80	@ .90
Strictly Folded	.50	@ .60
No. 1 Mixed Paper	.40	@ .50
Common Paper	.35	@ .40

Twines

Cotton—(F. o. b. Mill)—		
No. 1	.43	@ .48
No. 2	.41	@ .43
No. 3	.40	@ .42
India, No. 6 basis—		
Light	.19	@ .20
Dark	.17	@ .19
B. C., 18 basis	.41	@ .42
A. B. Italian, 18 Basis	.51	@ .61
Finished Jute—		
Dark, 18 basis	.30	@ .31
Light, 18 basis	.28	@ .30
Jute Wrapping, 3-6 Ply—		
No. 1	.20	@ .23
No. 2	.18	@ .20
Tube Rope—		
4-ply and larger	.15	@ .17
Fine Tube Yarn—		
5-ply and larger	.20	@ .28
4-ply	.21	@ .24
3-ply	.22	@ .25
Unfinished India—		
Basis	.14	@ .15
Paper Makers' Twine		
Balls	.11	@ .13
Box Twine, 2-3 ply	.14	@ .15
Jute Rope	.15	@ .16
Amer. Hemp, 6	.30	@ .32
Sisal Hay Rope—		
No. 1 Basis	.14	@ .16
No. 2 Basis	.10	@ .12
Sisal Lath Yarn—		
No. 1	.14	@ .15
No. 2	.11	@ .13
Manila Rope	.18	@ .19

CHICAGO

[FROM OUR REGULAR CORRESPONDENT]

Paper

F. o. b. Mill

All Rag Bond	35	@ 40
No. 1 Rag Bond	25	@ 35
No. 2 Rag Bond	14	@ 25
Water Marked Sulphite	9	@ 12
Sulphite Bond	7¼	@ 10¾
Sulphite Ledger	9½	@ 12
Superfine Writing	18	@ 24
No. 1 Fine Writing	14	@ 18
No. 2 Fine Writing	12	@ 14
No. 3 Fine Writing	9	@ 12
No. 1 M. F. Book	5¾	@ 7½
No. 1 S. & S. C. Book	6¼	@ 7¾
Coated Book	8	@ 10
Coated Label	8	@ 10
News—Rolls, mill	3¾	@ 4½
News—Sheets, mill	4	@ 4¾
No. 1 Manila	4¾	@ 6¼
No. 1 Fibre	4¾	@ 5½
No. 2 Manila	3¾	@ 4¼
Butchers' Manila	4¼	@ 4¼
No. 1 Kraft	5½	@ 6
No. 2 Kraft	4¾	@ 5
Wood Tag Boards	4½	@ 6
Sulphite Screenings	2¼	@ 2¾
Boards, per ton—		
Plain Chip	$35.00	@40.00
Solid news	37.50	@42.50
Manila Line Chip	50.00	@52.50
Container Lined—		
85 Test	55.00	@60.00
100 Test	60.00	@65.00

Old Papers

F. o. b. Chicago

Shavings—		
No. 1 Hard White	3.00	@
White Envel. Cuttings	3.00	@
No. 1 Soft Shav.	2.50	@ 2.60
No. 1 Mixed	1.25	@ 1.35
No. 2 Mixed	1.15	@ 1.25
Ledgers and Writings	1.45	@ 1.50
Solid Books	1.40	@ 1.50

No. 1 Books, Light.	1.25	@	1.30
Blanks	1.75	@	1.80
Ex. No. 1 Manila..	1.90	@	2.00
Manila Envelope Cuttings	2.10	@	2.15
No. 1 Manilas...	1.00	@	1.05
Folded News (over issue)	.90	@	1.00
Old Newspapers—			
No. 1	.85	@	.90
No. 2	.70	@	.75
Mixed Papers—			
No. 1	.75		
No. 2	.70		
Straw Clippings	.80	@	—
Binders' Clippings..	.80	@	—
Kraft	2.00	@	2.10
New Kraft Cuts...	2.10	@	2.15
Roofing Stock, f. o. b. Chicago, Net Cash—			
No. 1	$35.00	@	—
No. 2	33.00	@	—
No. 3	31.00	@	—
No. 4	31.00	@	—

PHILADELPHIA

[FROM OUR REGULAR CORRESPONDENT]

Paper

Bonds	.09½	@	.53
Ledgers	.15	@	.40
Writings—			
Superfine	.15	@	.20
Extra fine	.12	@	.22
Fine	.20	@	.30
Fine, No. 2	.20	@	.25
Fine, No. 3	.15	@	.20
Book, M. F.	.09¾	@	.12¼
Book, S. S. & C..	.11	@	.15
Book, Coated	.14¼	@	.20
Coated Lithograph.	.10	@	.13
Label	.10	@	.15
News	.05	@	.07
No. 1 Jute Manila	.12	@	.13
Manila Sul., No. 1	.08	@	.10
Manila No. 2	.07½	@	.08
No. 2 Kraft	—	@	.08½
No. 1 Kraft	—	@	.09½
Common Bogus	.03½	@	.04
Shaw Board	55.00	@	60.00
News Board	42.50	@	45.00
Chip Board	40.00	@	45.00
Wood Pulp Board. (Carload Lots)	2.75	@	3.00
Binder Boards—			
Per ton	70.00	@	75.00
Carload lots	65.00	@	70.00
Tarred Felts—			
Regular	61.00	@	63.00
Slaters	66.00	@	68.00
Best Tarred, 1-ply (per roll)	1.70	@	1.80
Best Tarred, 2-ply (per roll)	1.50	@	1.60
Best Tarred, 3-ply.	2.00	@	2.10

Bagging

F. o. b. Phila.

Gunny No. 1—			
Foreign	1.60	@	1.65
Domestic	1.75	@	—
Manila Rope	6.00	@	6.37½
Sisal Rope	1.25	@	—
Mixed Rope	1.30	@	—
Scrap Burlaps	1.00	@	1.25
Wool Tares, heavy.	2.00	@	2.13
Mixed Strings	1.30	@	—
No. 1, New Lt. Burlap	2.00	@	—
New Burlap Cuttings	2.00	@	2.25

Old Papers

F. o. b. Phila.

Shavings—			
No. 1, Hard White	4.00	@	4.10
No. 2, Hard White	3.25	@	3.50
No. 1 Soft White	3.00	@	3.10
No. 2 Soft White	1.75	@	2.00
No. 1 Mixed	1.60	@	1.75
No. 2 Mixed	1.25	@	1.50
Solid Ledger Stock.	2.00	@	2.25
Writing Paper	2.00	@	—
No. 1 Books, heavy	1.80	@	1.90
No. 2 Books, light	1.40	@	1.50
No. 1 New Manila.	2.50	@	2.60
No. 1 Old Manila..	1.75	@	2.00
Container Manila...	1.20	@	1.25
Old Kraft	2.25	@	2.50
Overissue News	1.25	@	1.35
Old Newspaper	.75	@	.80
No. 1 Mixed Paper.	.70	@	.75
Common Paper	.50	@	.60
Straw Board, Chip.	.75	@	.80
Binders Bd., Chip..	.75	@	.80

Domestic Rags—New.

Price to Mill, f. o. b. Phila.

Shirt Cuttings—			
New White, No. 1	.12½	@	.13½
New White, No. 2	.07	@	—
Silesias, No. 1	.08¼	@	.08½
New Unbleached.	.11	@	.11½
Washable	.05½	@	.05¾
Fancy	.07	@	.07¼
Cottons—according to grades—			
Blue Overall	.09	@	.09¼
New Blue	.03¾	@	.04
New Black Soft.	.06	@	.06¼
New Light Seconds	.03½	@	.03¾
Khaki Cuttings..	.05½	@	.06
Corduroy	.04	@	.04½
New Canvas	.10½	@	.11
New Black Mixed	.05¼	@	.05½

Old

White, No. 1—			
Repacked	7.50	@	8.00
Miscellaneous	6.25	@	6.50
White, No. 2—			
Repacked	.05½	@	.06
Miscellaneous	.04¾	@	.05¼
Thirds and Blues—			
Repacked	3.75	@	—
Miscellaneous	3.00	@	—
Black Stockings..	4.00	@	4.50
Roofing Stock—			
No. 1	1.75	@	1.85
No. 2	1,65	@	1.75
No. 3	1.15	@	1.20
No. 4	1.25	@	1.35
No. 5A	1.40	@	—
B	1.25		nominal
C	1.15		nominal

TORONTO

Paper

(Mill Prices to Jobbers f. o. b. Mill)

Bond—			
Sulphite	.11	@	.12½
Light tinted	.12	@	.13½
Dark tinted	.13½	@	.15
Ledgers (sulphite).	—	@	.13
Writing	.09½	@	.12
News, f. o. b. Mills—			
Rolls (carloads)..	3.75	@	—
Sheets (carloads)	—	@	4.50
Sheets (2 tons or over)	—	@	4.75
Book—			
No. 1 M. F. (carloads)	9.00	@	—
No. 2 M. F. (carloads)	8.00	@	—
No. 3 M. F. (carloads)	7.50	@	—
No. 1 S. C. (carloads)	9.50	@	—
No. 2 S. C. (carloads)	8.50	@	—
No. 1 Coated and litho	14.50	@	—
No. 2 Coated and litho	13.50	@	—
No. 3 Coated and litho	12.75	@	—
Wrapping—			
Rag Brown	4.75	@	—
White Rag	5.25	@	—
"B" Manila	5.50	@	—
No. 1 Manila	6.50	@	—
Fiber	6.50	@	—
Kraft, M. F.	7.00	@	—
M. G.	7.15	@	—

Pulp

(F. o. b. Mill)

Ground wood	$27.00	@	28.00
Sulphite easy bleaching	55.00	@	60.00
Sulphite news grade	50.00	@	55.00
Sulphite, bleached.	75.00	@	80.00
Sulphate	60.00	@	62.50

Old Waste Paper

(In carload lots, f. o. b. Toronto)

Shavings—			
White Env. Cut..	3.60	@	—
Soft White Book shavings	2.80	@	—
White Blk. News.	1.50	@	—
Book and Ledger—			
Flat Magazine and Book Stock(old)	1.25	@	—
Light and Crumpled Book Stock	1.10	@	—
Ledgers and Writings	1.50	@	—
Solid Ledgers	1.50	@	—
Manilas—			
New Manila Cut.	—	@	1.60
Printed Manilas..	1.10	@	—
Kraft	2.05	@	—
News and Scrap—			
Strictly Overissue.	.80	@	—
Folded News	.80	@	—
No. 1 Mixed Papers	—	@	.40

Domestic Rags—
Price to mills, f. o. b. Toronto

	Per lb.		
No. 1 White shirt cuttings	.13½	@	.13¾
No. 2 White shirt cuttings	.06½	@	.07
Fancy shirt cuttings	.06¾	@	.07
No. 1 Old Whites.	—	@	—
Third and blues	.05	@	.05¼
	Per cwt.		
Black stockings..	.04	@	—
Roofing stock:			
No. 1	2.20	@	—
No. 2	2.10	@	—
Manila rope	.06	@	.06¼
No. 2	1.55	@	—

Bids and Awards for Government Paper

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., July 16, 1924.—The R. P. Andrews Paper Company has been awarded the contract by the Bureau of Supplies and Accounts, Navy Department for furnishing 131,000 rolls of toilet paper to various navy yards on the Atlantic Coast at $14,327.20. The same firm will also furnish 17,000 rolls of the same to Pacific Coast navy yards at $1,785.00. Bids for these items were received on June 3.

The Government Printing Office has announced that it has awarded to Reese & Reese the contract for furnishing 26,000 pounds of wood manila tag board in 21¾" rolls at $.04535, bids for which were received on June 13.

The R. P. Andrews Paper Company will also furnish the Printing Office with 10,000 pounds (125 reams) of 25 x 38 end paper for book waste leave at $.0765, bids for which were received on June 25.

The Government Printing Office will receive bids on July 21 for 6,300 pounds (200 reams) of 24 x 38, 31½, No. 13, yellow bond paper.

The Government Printing Office will receive bids on July 25 for 1,575 pounds (50 reams) of 24x 38, 31½, unglazed salmon manifold bond paper.

The Government Printing Office has received the following bids for 14,400 pounds of 21 x 32, No. 9, white, pink, and canary sulphite manifold paper: Import Paper Company, $.115 and $.13; Old Dominion Paper Company, $.1549 and $.1688; Whitaker Paper Company, $.1521; R. P. Andrews Paper Company, $.144, $.1625, $.1206, $.1487 and $.168; Dobler & Mudge, $.1481 and $.1468; Reese & Reese, $.13345; Maurice O'Meara Company, $.128 and $.14; Barton Duer & Kock Paper Company, $.1481 and $.168; Bishop Paper Company Incorporated, $.17 and $.185; and American Writing Paper Company, $.15 and $.16.

Bids were also received for 12,500 pounds of 21 x 32 No. 7 white bond paper; 12,500 pounds of 21 x 32 No. 7 white record manifold bond paper and 16,000 pounds of 21 x 32 No. 9 white record manifold bond paper. The bids were as follows: Esleeck Manufacturing Company, $.476 and $.37; Import Paper Company, $.25. $.4325, and $.365; Old Dominion Paper Company, $.2724, $.4349 and $.3734; Whitaker Paper Company, $.22; R. P. Andrews Paper Company, $.268, $.4265, and $.3474; Dobler & Mudge, $.2669, $.4249, and $.3659; American Writing Paper Company, $.29, $.36, and $.34; Barton Duer & Kock Paper Company, $.2669, $.4250, and $.3657; and Bishop Paper Company, $.2475.

A. Taylor Co. Sued on Waste Paper Contract

WASHINGTON, D. C., July 16, 1924.—The District Attorney has filed a suit in the Supreme Court of the District of Columbia on behalf of the United States against the A. Taylor Company, Inc., to recover $5,272.47 alleged to be due on a contract whereby the defendant corporation agreed to pay the Government $1.62½ a hundred pounds for waste paper removed from certain government buildings.

New York Market Review

OFFICE OF THE PAPER TRADE JOURNAL,
WEDNESDAY, JULY 16, 1924.

The paper market registered a slight change for the better during the past week. True the improvement was almost imperceptible and yet it was full of significance and tended to cheer up the paper men considerably. The gain in itself was nothing, perhaps, to justify this cheer but underlying it were symptoms which threw a flashlight on the future, telling the optimistic ones just what they may reasonably expect.

It now seems apparent that business will show a substantial spurt by the middle of August at the very latest which will mean that the market will get down to its autumn business earlier than is usual. "There is no stock to speak of anywhere," said one paper man this week, "and the buyers are slowly coming to understand this. As that realization comes to them they gradually become convinced that this is a pretty good time to buy. To that may be attributed the fact that the market has shown a slow gain during the past two weeks and that a flood of inquiries indicates that the demand for all lines will steadily increase from now until that time when the market gathers its real impetus which will probably be about the middle of next month.

Prices are holding firm at this writing. Changes have not occurred since a week ago but there are indications that a break may occur at any time and that it will be sure to occur before long. It is a foregone conclusion that when this comes, the prices will move upward instead of downward.

News print demand, while somewhat slower than a few weeks ago because of the hot weather and vacation period and its influence on the printing and publishing business, lost no ground the past week. It keeps moving steadily and there is no complaint from this source.

Book papers are in better demand than they have been for some time. Buying under this head has for a long time been of the strictest hand to mouth description but there is evidence now that buyers are loosening up a trifle and beginning to think of the future as well as the immediate present.

There is a somewhat better demand for writing papers. The prices hold firm and one of the earliest marked improvements that is looked for is in this department.

Tissues which have been extremely slow are showing a little more action. The market is much more interested in them than it has been for a long time as is shown by the numerous inquiries received regarding them.

An improvement is also noted in the board business. Here the buying is less of the hand to mouth order than it has been and the improvement is due to an extent to the demand for board for seasonal products.

Mechanical Pulp

Mechanical pulp labors along about as it has been doing, the prices remaining the same and the demand showing no marked change. The business is pronounced fair.

Chemical Pulp

Chemical pulp which has been showing a little better action of late had an exceedingly good week. Some good business was booked and the prices hold firm. The market is still shy on good imported pulp.

Rags

A better demand has developed for rags of all grades and the market must be regarded as much firmer than it was a week ago at this time. The improvement has been especially felt in the lower grades and, while the prices practically remain unchanged, a trend for a higher figure is evident. Roofing rags have showed the greatest activity, the call for them being most encouraging. As a result of the increased demand the price on several grades has gone upward. The indications are that the rag market had seen the worst of the business depression and that from now on better conditions may be anticipated.

Old Rope and Bagging

Old rope and bagging have failed to make good the prediction of a week ago that prices would advance. While there was some gain in demand during the second week of July that increase was short-lived and has apparently exhausted itself, the demand having settled back to the status it occupied before its brief flurry of activity.

Waste Paper

The waste paper market is in a slightly better condition than it has been. The higher grades are holding firm and the lower grades which have been exceptionally slow for some weeks appeared to be a little easier at this writing with a fair prospect of calling forth a better demand soon. A few price changes have occurred, the tendency being downward rather than upward.

Twine

It is the same old story as far as twine is concerned this week. The market is at the same low ebb with only enough demand to give it a semblance of life. Price, which have refused to change for a long time, are still chalked up in the same numerals. When conditions can reasonably be expected to improve is more than the twine men care to predict.

To Represent L. L. Brown Paper Co. in Chicago

CHICAGO, July 14, 1924.—To care for its growing market, the increasingly important center of the Middle West, the L. L. Brown Paper Company has appointed Charles H. Mohan as its representative in Chicago and vicinity.

Mr. Mohan has had an especially interesting and valuable paper training and experience. A product of the paper city of Holyoke, Mass., he first became identified with paper when, during his school vacations, he was employed by the National Blank Book Company. Later he served as junior clerk for the American Pad and Paper Company, also of Holyoke. After two years with that company, he joined the Crocker-McElwain Company, where for twelve years he came in close contact with many phases of paper manufacturing, sales inquiries, order handling and traffic.

Before his appointment as Chicago representative of the L. L. Brown Paper Company, he was for four years traffic manager of the J. & J. Rogers Company, Au Sable Forks, N. Y., manufacturers of pulp and paper. Mr. Mohan will make his headquarters at 180 West Randolph street.

Container Folks at Atlantic City

The National Container Association will hold its summer meeting at the Hotel Traymore, Atlantic City, N. J., on July 22 and 23. Meetings of the executive, sales promotion, standardization and statistical committees will be held on July 21.

During the past week, President John L. Blanchard, of the association, visited the offices of the organization in Chicago and outlined a tentative program for the sessions. No arrangements are being made for a speaker at this meeting, as it is believed that the time may be utilized to better advantage in discussing and considering subjects pertaining more directly to the industry.

Uncas Paper Board Co. Adds to Staff

NORWICH, Conn., July 14, 1924.—L. S. Sterrett has been made assistant manager and E. E. Earhart, superintendent of the Uncas Paperboard Company here. Joseph H. Eilers, the manager of the company, is at present taking a month's vacation.

KVP

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For tight-sealing cartons and wrapping dry foods.

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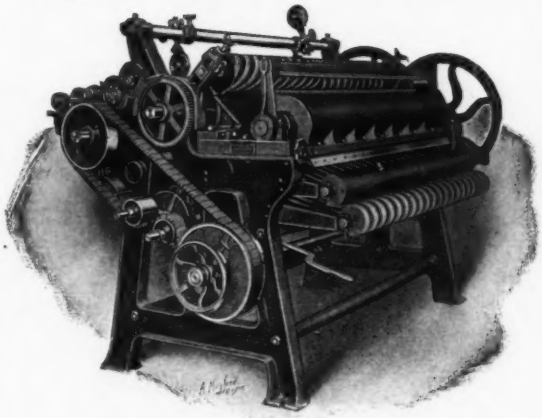

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English Weave in Two, Three, Four, Five and Six Ply

60 Inches to 176 Inches in Width

Fine Faced Felts for Fine Papers
Absolutely No Felt Marks in Paper

TRIUNE Three Ply Felts for Coarse Papers

Miscellaneous Markets

OFFICE OF THE PAPER TRADE JOURNAL,
WEDNESDAY, JULY 16, 1924.

The quietude which has so long marked the chemical market remained unbroken and undisturbed during the past week. It is simply marking time and waiting for something to happen. What this will be and when it may be expected to occur is more than any one will presume to predict. Such buying as is being done continues to be of the hand to mouth order and nothing is able to draw the buyers out for anything beyond that. The tendency of the dealers is to get away from price cutting. There was quite a bit of it being done a while ago but today there is scarcely any of it and prices are being strictly adhered to almost without exception.

The close of the Democratic convention and the setting aside of all speculation as to who would be the party's standard bearer has had no effect on the market. It is to early, however, to judge if it will have any influence or not. The chemical market can not be considered as an element to itself. It is dependent upon various trades and industries and every pulse beat is a reflection from other sources. In as much as any effect of the convention's close must come to it indirectly it is too early to look for any stimulation or opposite influence. After the effect has been felt through the various industries and trades which contribute to the chemical market the reaction, if there is any, will pulsate through the chemical market and work for better or worse as the case may be. The opinion of several chemical men interviewed by the PAPER TRADE JOURNAL this week, however, was that the latest political developments would have but little if any business effect for the time being.

BLANC FIXE.—Blanc fixe remains the same as last week with orders few and far between but prices holding up. There is no very great supply on the market. It is quoted at from $75 to $80 a ton for the powder and from $50 to $55 for the pulp.

BLEACHING POWDER.—The bleaching powder manufacturers have experienced a rather cool season which accounts for the fact that there is not much distress stock on the market. Some of them have cut down their production in order that they may better keep pace with the actual demand of the market at this time. The prices hold firm, being from 1.90 to 2.15 cents a pound.

CAUSTIC SODA.—Caustic soda is beginning to suffer more from slow demand than has been the case until recently. The demand has remained most satisfactory while most of the commodities have been suffering from inattention but now it looks as though caustic soda was to have a taste of the bitter with the sweet. Prices are maintained, however, at from 3.10 to 3.15 cents a pound on a flat basis at the works.

CASEIN.—Casein is trying hard to hold its own in the face of unfavorable market conditions. The distress lots which recently filled the market are gone and the price is holding at from 10½ to 11 cents a pound.

CHINA CLAY.—China clay is not in as great demand as it has been, showing just now its first tendency to share in the market's general dullness. The demand started to slow down a week ago and has grown a bit slower during the past week. The price is from $16 to $20 a ton for the imported grades and from $12 to $15 a ton for the domestic grades.

CHLORINE.—No change is reported as far as chlorine is concerned. The demand has been very slight for some time but it is in no worse condition now than for several weeks past. The price is still from 4.50 to 7.00 cents a pound in tanks.

ROSIN.—Rosin keeps just about the same. The price is firm but there is much less buying than there should be at this particular season. It is still quoted at from $5.75 to $5.80 for 280 pounds.

SALT CAKE.—The distress tonnage of salt cake has entirely disappeared from the market which helps this commodity into a little more commanding position in the market. The demand is nothing to boast of and the outlook for early improvement is none too good. The price remains at from $17 to $20 a ton.

SODA ASH.—Soda ash is one of the commodities which has been hardest hit the past week. The demand has suffered a sharp decline but, in spite of it, the manufacturers are adhering strictly to their schedule, the price remaining 1.38 cents a pound on a flat basis at the works.

SULPHATE OF ALUMINA.—There has been no change in sulphate of alumina except that there has been less price cutting in it the past week than for some time. Buying interest is almost nil. It is still quoted at from 1.30 to 1.35 cents for the commercial grade at the Eastern works and from 2.15 to 2.35 cents a pound for iron free.

SULPHUR.—Sulphur which started going down the demand toboggan sometime since does not recover, the demand being pitifully slow. The price is from $18 to $19 a ton.

TALC.—Talc goes neither one way nor the other. The demand is none too good but is considered fair when the general market conditions are considered. The price is from $16 to $17 a ton.

Kalbfleisch Corp. Gets Verdict

The suit brought by the Kalbfleisch Corporation of New York against the Providence Drysalters Company, E. Fielding Jones, its president, of Providence, R. I., and Lester P. Brown, of Erie, Pa., a former employee of the Kalbfleisch Corporation, in the United States District Court in Providence, has resulted in the granting of a decree in favor of the Kalbfleisch Corporation, restraining the Providence Drysalters Company, E. Fielding Jones and Lester P. Brown from utilizing in any way the secret processes, formulæ and methods used by the Kalbfleisch Corporation in the manufacture of Satin White.

When the suit was brought a preliminary injunction was granted to the Kalbfleisch Corporation and at the hearing on the preliminary injunction facts were disclosed which resulted in a final decree being entered July 1 granting a permanent injunction. The suit was brought by the Kalbfleisch Corporation as the result of investigations made by the Pinkerton National Detective Agency, started when Brown—a former employee of the Kalbfleisch Corporation—accepted a position with the Providence Drysalters Company, the investigation disclosing that Brown had divulged information confidential to the Kalbfleisch Corporation concerning the secret processes used in the manufacture of Satin White.

Through extended research the Kalbfleisch Corporation has perfected a Satin White superior to the former product and the litigation in Rhode Island was taken in protection of the secret processes which the Kalbfleisch Corporation developed.

The Kalbfleisch Corporation was represented by Bergen & Prendergast of New York, its General Counsel, and by Gardner, Moss & Haslam of Providence.

Waxed Paper Men Developing Credit Bureau

The newly formed association of waxed paper manufacturers has been doing some most aggressive work in developing its Credit Bureau Service, trade customs, etc. A meeting recently in Chicago is to be followed by another in New York on July 22, when reports of its Printing Costs and Research Bureau Committees will be considered.

The work of this association is being handled from the offices of the American Paper and Pulp Association, with O. M. Porter, Assistant Secretary of the central organization as secretary of the waxed paper group.

Whalen Pulp & Paper Mills Reopen

VANCOUVER, B. C., July 14, 1924.—After a shutdown of six months the large pulp and paper plant of the Whalen Pulp and Paper Co. mill at Port Alice re-opened early this month. Increased demand for pulp from the Orient was said to have been the cause.